Preliminary
Hydrology Study and Drainage Analysis

Tentative Tract Map 20707
Residential Sub-divisions Single Family Dwellings

San Bernardino, CA 92407
APN(s): 0348-121-14, -27, -28,
and 0261-011-02, -03 -10

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FEMA FIRM	C
San Bernardino County Hydrology Manual - Isohyetal Map	D
San Bernardino County Hydrology Manual - Soils Map	E
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A. Introduction

1.1 Purpose and Scope

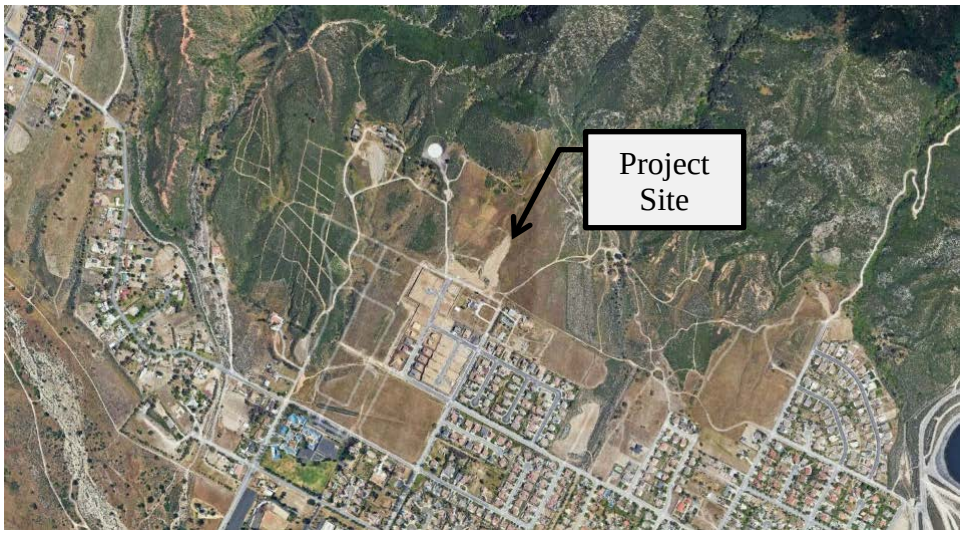
The following Final Hydrology and Hydraulics Report has been prepared for the development of a residential sub-division in San Bernardino, California. This report has been prepared to satisfy the City of San Bernardino Department of Public Works hydrology study requirements for this type of development.

The scope of this report is as follows:

- Identification of tributary flow impacting the project site.
- Identification of existing conditions, on-site drainage areas, and calculation of peak flow for these areas.
- Identification of developed conditions, on-site drainage areas and calculation of peak flow for these areas.
- Comparison of existing vs. developed peak flow rates and discussion of mitigation measures used to attenuate increases (if any) in peak flows.
- Identification of floodplain(s) impacting the site.
- Summary of finding and conclusion.

1.2 Project Overview

The proposed project consists of the development and construction of 155 residential single-family dwellings on approximately 107.7 acres of land total. An estimated 43.2 acres will be designated for the residential homes while the remaining 64.5 acres will be considered off-site tributary. The site is presently vacant. The project site is located to the north of Verdemont Drive and about 1.0 miles northeast of the 215-Freeway.



Site Location

1.3 Existing Conditions Drainage Tributary

The project site is located in the City of San Bernardino surrounded by residential and Spring Trails zoning. The existing tributary affecting and coving the project site consists of undeveloped foothill land cover in native chaparral. The development is proposed to drain to two proposed extended detention basins and will outflow to a proposed reinforced concrete pipe that will connect to the existing 63-inch Chestnut Avenue Storm Drain within Verdemont Avenue. The existing site generally drainage is towards the south.

Picture 1: Site

Picture 3: Site

1.4 References

Relevant portions of following documents have been made part of this study by reference:

1.) San Bernardino County Department of Public Works Hydrology Manual (August 1986).

2.) Ground topography executed by Joseph E. Bonadiman & Associates, Inc. (September 2021).

B. Methodology

1.1 General Methodology

The requirements and recommendations found in the San Bernardino County Hydrology Manual (August 1986) provided by the San Bernardino County Department of Public Works was used as the basis for the methodology and calculations found in this report. On-site calculations were performed using the Rational and Unit Hydrograph methods to determine peak flow rates per County requirements.

For the 2, 5, 10 and 25-Year storm events, Antecedent Moisture Condition (AMC) I and II was used respectively. For the 100-Year storm event, Antecedent Moisture Condition (AMC) III was used. The San Bernardino County-approved software applications provided by CivilDesign® Corporation were used for all study calculations.

1.2 Sources of Topography

For the existing conditions on-site areas, mapping and topographic contours was provided by a survey conducted in 08-2017 per Tentative Tract Map No. 20707, Allard Engineering and Digital Mapping, Inc.

1.3 FEMA Floodplain Identification & Considerations

Per FEMA FIRM Panel No. 06071C7930J (Effective Date – September 2, 2016), the project site is located within unshaded Zone X ("Areas determined to be outside the 0.2% annual chance floodplain.").

Refer to Exhibit "C" for the FIRM used in this report.

1.4 Watershed Precipitation

Precipitation values used in this report were obtained from the isohyetal map(s) included in the San Bernardino County Hydrology Manual and are tabulated below. The slope of intensity duration curve value of 0.70 (mountain area) was used per the County Hydrology Manual.

Table 1 – Watershed Precipitation

STORM	ATLAS 2
10-YEAR, 1-HOUR	1.0"
100-YEAR, 1-HOUR	1.5"
2-YEAR, 6-HOUR	2.0"
100-YEAR, 6-HOUR	4.5"
2-YEAR, 24-HOUR	4.0"
100-YEAR, 24-HOUR	12.0

Refer to Exhibit "D" for the San Bernardino County Hydrology Manual Isohyetal Map(s) used in this report.

1.5 Watershed Losses

Soil types and SCS Curve Number (AMC II) used in this report were obtained from Figures C-6, included in the San Bernardino County Hydrology Manual and are tabulate below.

The site is composed of Type "A" and "B" soil. The existing condition study site is predominantly undeveloped with poor cover. The developed conditions site is proposed to be residential 3-4 dwelling. Referencing the San Bernardino County Hydrology Manual Figures C-3, the SCS Curve Numbers (AMC II) used for existing and developed conditions are as follows:

Table 2 – Watershed Losses

COVER TYPE	SOIL TYPE	QUALITY OF COVER	SCS CURVE NO. (AMC II)
Undeveloped (Chaparral, Narrow Leaf)	A	Poor	71
	B	Poor	82
Residential (3-4 dwl per acre)	A	-	32
	B	-	56

Refer to Exhibit "E" for the San Bernardino County Hydrology Manual SCS Curve Number per Figure C-2, C-3 and to C-6.

1.6 Rational Hydrology Method Calculations

The San Bernardino County Rational Method (CIVILD) software application provided by CivilDesign® Corporation was used for the rational method calculations included in this report.

C. Existing Conditions Hydrology Calculations

1.1. Existing Conditions Rational Method Calculations

Input values for the existing conditions rational method calculations prepared for this report are tabulated below:

Table 3– Existing Conditions Rational Method Input Values

AREA	SIZE (AC)	TYPE	SOIL	SCS (AMC II)	PERVIOUS RATIO	U.S. ELEV. (FT)	D.S. ELEV. (FT)	LENGTH (FT)
A1	9.37	UNDEVELOPED (POOR)	A=50% B=50%	72.5	1.0	2100.0	2025.0	789
A2	7.33	UNDEVELOPED (POOR)	A=95% B=5%	67.55	1.0	2135.0	2025.0	997
A3	1.81	UNDEVELOPED (POOR)	A	67.0	1.0	-	-	-
B1	1.81	UNDEVELOPED (POOR)	B	78	1.0	2405.0	2302.0	679
B2	2.52	UNDEVELOPED (POOR)	B	78	1.0	2032.0	2135.0	434
C1	6.53	UNDEVELOPED (POOR)	A	67	1.0	2040.0	1960.0	964
D1	2.50	UNDEVELOPED (POOR)	A	73.6	1.0	2090.0	2050.0	800
D2	7.02	UNDEVELOPED (POOR)	A	67	1.0	2050.0	1965.0	901
E1	2.57	UNDEVELOPED (POOR)	B	78	1.0	2270.0	2200.0	907
E2	13.16	UNDEVELOPED (POOR)	B	78	1.0	2200.0	2100.0	1082
E3	20.93	UNDEVELOPED (POOR)	B	72.5	1.0	2100.0	1996.0	1750
F1	6.71	UNDEVELOPED (POOR)	B	78	1.0	2302.0	2100.0	761
G-1	6.34	UNDEVELOPED (POOR)	A	67	1.0	2155.0	2070.0	768
G-2	19.08	UNDEVELOPED (POOR)	A	67	1.0	2070.0	1987.0	997

Output for the existing conditions rational method calculations are tabulated as follows:

Table 4– Existing Conditions Rational Method Output Calculations

AREA	NODE	ATLAS 2 Q_{100} (CFS)	TC100 (MIN)
A	103.1	70.7	12.1
B	202	18.7	10.9
C	301	25.1	13.5
D	402	30.5	15.7
E	503	107.1	17.6
F	601	31.5	9.7
G	702	89.9	13.7

Refer to Attachment No. 1 for printouts of the Existing Conditions Rational Method Calculations.
Refer to Exhibit "F" for the Existing Conditions Hydrology Study Map.

1.2. Existing Conditions Unit Hydrograph Method Calculations

Based on the output data from the Rational Method above the 100-year TC value was used. Input values for the developed conditions unit hydrograph method calculations prepared for this report are tabulated as follows:

Table 5 – Existing Conditions Unit Hydrograph Method Input Values

DRAINAGE AREA	SIZE (AC)	SCS	PERVIOUS FRACTION	T.C. (HOUR)
A	18.06	70.0	1.0	0.202
B	4.33	78.0	1.0	0.182
C	6.53	67.0	1.0	0.225
D	9.52	68.7	1.0	0.262
E	36.66	74.9	1.0	0.307
F	6.71	78	1.0	0.162
G	25.42	67.0	1.0	0.228

Output for the existing conditions unit hydrograph method calculations are tabulated as follows:

Table 6 – Existing Conditions Unit Hydrograph Method Output Calculations

DRAINAGE AREA	SIZE (AC)	Q_2 (CFS)	Q_5 (CFS)	Q_{10} (CFS	Q_{25} (CFS)	Q_{100} (CFS)	LAG_{100} (HR)
A	18.06	20.53	29.57	40.60	50.15	69.04	0.162
B	4.33	4.98	7.10	9.68	11.88	16.13	0.146
C	6.53	7.30	10.55	14.54	18.02	24.92	0.180
D	9.52	8.86	13.01	18.36	22.81	31.88	0.210
E	36.66	32.04	46.37	64.85	80.07	110.82	0.234
F	6.71	7.97	11.51	15.82	19.44	26.49	0.130
G	25.42	28.14	40.72	56.19	69.63	96.38	0.182
A & G	43.48	48.67	70.29	96.9	119.78	165.42	~
B & F	11.04	12.95	18.61	25.0	31.32	42.62	

DRAINAGE AREA	SIZE (AC)	VOL_2 (AF)	VOL_5 (AF)	VOL_{10} (AF)	VOL_{25} (AF)	Q_{100} (AF)	LAG_{100} (HR)
A	18.06	0.877	2.132	6.088	8.534	15.724	0.162
B	4.33	0.355	0.762	1.759	2.386	4.024	0.146
C	6.53	0.253	0.645	2.037	2.893	5.52	0.180
D	9.52	0.420	1.043	3.105	4.377	8.187	0.210
E	36.66	2.485	5.592	13.898	19.084	33.378	0.234
F	6.71	0.550	1.181	2.726	3.697	6.236	0.130
G	25.42	0.986	2.508	7.928	11.262	21.500	0.182
A & G	43.48	1.863	4.640	14.016	19.796	37.224	~
B & F	11.04	0.905	1.943	4.485	6.083	10.260	~

Refer to Attachment No. 3 for printouts of the Existing Conditions Unit Hydrograph Calculations.
Refer to Exhibit "F" for the Existing Conditions Hydrology Study Map.

D. Developed Conditions Hydrology Calculations

1.1 Developed Conditions Rational Method Calculations

Input values for the developed conditions rational method calculations were adjusted accordingly and are tabulated below:

Table 7 – Developed Conditions Rational Method Input Values

AREA	SIZE (AC)	TYPE	SOIL	SCS (AMC II)	PERVIOUS RATIO	U.S. ELEV. (FT)	D.S. ELEV. (FT)	LENGTH (FT)
A-1 NODE 100-101	1.99	Residential (3-4 dwl per ac)	A & B	39.2	0.6	2119.0	2093.9	470
A-2 NODE 101-102	2.44	Residential (3-4 dwl per ac)	A & B	44.0	0.6	2093.9	2086.0	790
A-3 NODE 102-103	1.04	Residential (3-4 dwl per ac)	A & B	48.8	0.6	2089.0	2007.0	900
PIPE NODE 103-104	~	~	~	~	~	2000.0	1999.0	94
MINOR CONFLUENCE CURRENT STREAM 1 OF 2 AT NODE 104								
A-4 NODE 105-106	1.83	Residential (3-4 dwl per ac)	A	32	0.6	2116.5	2093.8	580
A-5 NODE 106-107	0.90	Residential (3-4 dwl per ac)	A & B	44.0	0.6	2093.8	2086.0	755
A-6 NODE 107-108	3.09	Residential (3-4 dwl per ac)	A & B	46.4	0.6	2086.0	2011.2	760
PIPE NODE 108-104	~	~	~	~	~	2003.0	1999.0	43
MINOR CONFLUENCE CURRENT STREAM 2 OF 2 AT NODE 104								
PIPE NODE 104-109	~	~	~	~	~	1999.9	1996.5	230
MAJOR CONFLUENCE CURRENT STREAM 1 OF 2 AT NODE 109								
A-08 NODE 110-111	4.13	Residential (3-4 dwl per ac)	A & B	41.6	0.6	2094.6	2032.0	800
MINOR CONFLUENCE CURRENT STREAM 1 OF 2 AT NODE 111								
A-07 NODE 112-113	4.17	Residential (3-4 dwl per ac)	A & B	34.4	0.6	2094.6	2032.0	800
PIPE NODE 113-111	~	~	~	~	~	2024.0	2022.0	38
MINOR CONFLUENCE CURRENT STREAM 2 OF 2 AT NODE 111								
PIPE NODE 111-109	~	~	~	~	~	2022.0	1996.5	244
MAJOR CONFLUENCE CURRENT STREAM 2 OF 2 AT NODE 109								
PIPE NODE 111-114.1	~	~	~	~	~	1996.5	1974.0	1288
MAJOR CONFLUENCE CURRENT STREAM 1 OF 4 AT NODE 114.1								
A-21 NODE 126-127	0.9	Residential (3-4 dwl per ac)	A	32	0.6	2031.3	2002.0	500

A-19 NODE 127-128	1.42	Residential (3-4 dwl per ac)	A	32	0.6	2002.0	1982.0	850
PIPE NODE 128-114.2	~	~	~	~	~	1976.0	1974.0	35
MAJOR CONFLUENCE CURRENT STREAM 2 OF 4 AT NODE 114.2								
A-9 NODE 100-129	0.38	Residential (3-4 dwl per ac)	A	32	0.6	2119.0	2044.5	664
A-15 NODE 129-130	0.42	Residential (3-4 dwl per ac)	A	32	0.6	2044.5	1983.0	726
PIPE NODE 130-131	~	~	~	~	~	1975.3	1974.3	36
MINOR CONFLUENCE CURRENT STREAM 1 OF 2 AT NODE 131								
A-13 NODE 118-132	4.62	Residential (3-4 dwl per ac)	A	32	0.6	2056.7	2013.0	875
A-19 NODE 132-131	0.19	Residential (3-4 dwl per ac)	A	32	0.6	2013.0	1983.0	326
MINOR CONFLUENCE CURRENT STREAM 2 OF 2 AT NODE 131								
PIPE NODE 131-114.3	~	~	~	~	~	1974.3	1974.0	38
MAJOR CONFLUENCE CURRENT STREAM 3 OF 4 AT NODE 114.3								
A-12 NODE 112-118	3.27	Residential (3-4 dwl per ac)	A	32	0.6	2094.6	2056.7	909
PIPE NODE 118-117	~	~	~	~	~	2048.0	2047.4	44
MINOR CONFLUENCE CURRENT STREAM 1 OF 2 AT NODE 117								
A-11 NODE 115-116	2.84	Residential (3-4 dwl per ac)	A	32	0.6	2094.2	2056.0	765
PIPE NODE 116-117	~	~	~	~	~	2048.0	2047.4	31
MINOR CONFLUENCE CURRENT STREAM 2 OF 2 AT NODE 117								
PIPE NODE 117-119	~	~	~	~	~	2047.4	2036.0	477
MINOR CONFLUENCE CURRENT STREAM 1 OF 2 AT NODE 119								
A-10 NODE 105-120	1.41	Residential (3-4 dwl per ac)	A	32	0.6	2116.5	2052.5	586
PIPE NODE 120-119	~	~	~	~	~	2044.5	2036.0	93
MINOR CONFLUENCE CURRENT STREAM 2 OF 2 AT NODE 119								
PIPE NODE 119-121	~	~	~	~	~	2036.0	2003.0	400
MINOR CONFLUENCE CURRENT STREAM 1 OF 2 AT NODE 121								
A-20 NODE 124-125	2.43	Residential (3-4 dwl per ac)	A	32	0.6	2032.5	2013.4	972
PIPE NODE 125-123	~	~	~	~	~	2005.0	2004.5	36
A-22 ADD AREA	3.91	Residential (3-4 dwl per ac)	A	32	0.6	~	~	~
PIPE NODE 123-121	~	~	~	~	~	2004.5	2003.0	82

MINOR CONFLUENCE CURRENT STREAM 2 OF 2 AT NODE 121								
PIPE NODE 121-114	~	~	~	~	~	2003.0	1974.6	265
MAJOR CONFLUENCE CURRENT STREAM 4 OF 4 AT NODE 114.4								
A-18 ADD AREA	1.83	Residential (3-4 dwl per ac)	A	67	0.6	~	~	~
B-1 NODE 200-201	4.12	UNDEVELOPED (POOR)	B	78	1.0	2405.0	2151.0	995
B-2 NODE 201-202	7.49	UNDEVELOPED (POOR)	B	78	1.0	2151.0	2081.0	549
C-1 NODE 300-301	6.54	Residential (3-4 dwl per ac)	A	32	0.6	2041	1965	730
PIPE NODE 301-302	~	~	~	~	~	1957	1956	35
D-1 NODE 400-401	2.50	UNDEVELOPED (POOR)	A	73.6	1.0	2090.0	2050.0	800
D-2 NODE 401-402	7.02	UNDEVELOPED (POOR)	A	67	1.0	2050.0	1965.0	901
E-1 NODE 500-501	2.57	UNDEVELOPED (POOR)	B	78	1.0	2270.0	2200.0	907
E2 NODE 501-502	13.16	UNDEVELOPED (POOR)	B	78	1.0	2200.0	2100.0	1082
E3 NODE 502-503	20.93	UNDEVELOPED (POOR)	B	72.5	1.0	2100.0	1994.0	1570

Output for the developed conditions rational method calculations are tabulated as follows:

Table 8– Developed Conditions Rational Method Output Calculations

AREA	NODE	Q_{100} (CFS)	TC_{100} (MIN)
A	114	143.2	11.7
C	302	30.4	9.1

Refer to Attachment No. 2 for printouts of the Developed Conditions Rational Method Calculations.
Refer to Exhibit "G" for the Developed Conditions Hydrology Study Map.

1.2 Developed Conditions Unit Hydrograph Method Calculations

Based on the output data from the Rational Method above the 100-year TC value was used. Input values for the existing conditions unit hydrograph method calculations prepared for this report are tabulated as follows:

Table 9 – Developed Conditions Unit Hydrograph Method Input Values

DRAINAGE AREA	SIZE (AC)	SCS	PERVIOUS FRACTION	T.C. (HOUR)
A	43.08	36.7	0.61	0.1953
B	11.61	78.0	1.0	0.1933
C	6.54	32.0	0.60	0.1515
D	9.52	68.7	1.0	0.2622
E	36.66	74.9	1.0	0.3073

Output for the existing conditions unit hydrograph method calculations are tabulated as follows:

Table 10 Developed Conditions Unit Hydrograph Method Output Calculations

DRAINAGE AREA	SIZE (AC)	Q_2 (CFS)	Q_5 (CFS)	Q_{10} (CFS	Q_{25} (CFS)	Q_{100} (CFS)	LAG_{100} (HR)
A	43.08	60.62	83.73	103.43	127.92	154.32	0.156
B	11.61	14.16	20.13	27.00	33.11	44.62	0.155
C	6.54	9.14	12.62	15.45	19.12	25.61	0.121
D	No Change From Existing Condition						
E	No Change From Existing Condition						

DRAINAGE AREA	SIZE (AC)	VOL_2 (AF)	VOL_5 (AF)	VOL_{10} (AF)	VOL_{25} (AF)	Q_{100} (AF)	LAG_{100} (HR)
A	43.08	5.79	8.63	12.24	16.58	30.42	0.156
B	11.61	0.95	2.04	4.72	6.40	10.79	0.155
C	6.54	0.8979	1.34	1.79	2.40	4.42	0.121
D	No Change From Existing Condition						
E	No Change From Existing Condition						

Refer to Attachment No. 4 for printouts of the Developed Conditions Unit Hydrograph Calculations.
Refer to Exhibit "G" for the Developed Conditions Hydrology Study Map.

E. Detention Basin & Debris Basin Analysis

1.1 Detention Basin Analysis

A detention/retention basin is proposed to attenuate storm flows and to address water quality requirements for the site. The proposed basing will be sized to mitigate any increase in run-off associated with the proposed development.

- Drainage management area 'A' experienced the largest increase in storm volume over the existing condition during the 2 year 24 hour storm with an increase in storm volume of 4.06 ac-ft. the proposed water quality basin #1 will be designed to retain and meter out this increase in storm volume.

- Drainage management area 'C' experienced the largest increase in storm volume over the existing condition during the 2 year 24 hour storm with an increase in storm volume of 0.74 ac-ft. the proposed water quality basin #1 will be designed to retain and meter out this increase in storm volume.

- Basin design and routing analysis will be prepared during final engineering and will utilize the following design criteria

    - All detention basins shall be design based on the "Detention Basin Design Criteria for San Bernardino County", as follows:

        - When feasible no more than 50% of the basins volume shall be above natural grade.
        - 3:1 maximum slope on wet side and 2:1 maximum slope on dry side.
        - Maximum water depth should not exceed 6'.
        - A spillway shall be design to pass the fully developed 1000 year peak flow rate (Q_{1000} = 1.35 Q_{100}).
        - A minimum of 1-foot of freeboard above the 1000-year HWL or 2-feet of freeboard above the 100 –year HWL, whichever is more stringent.
        - Access to the basin shall be gated and locked.

Refer to Attachment No. 5 for a printout of the 2-year, 10-year, 25-Year and 100-Year Hydrograph routing calculations for the proposed basins system.

1.2 Debris Basin Analysis

Debris basins are proposed to capture sediment and debris to avoid sedimentation of the infiltration basin. Debris yield calculations prepared for this report are tabulated as follows:

Table 13 – Detention Basins Output Calculations

DEBRIS BASIN	DRAINAGE AREA (AC)	DRAINAGE AREA (SQ-MI)	DEBRIS YEILD (CY/SQ-MI)	DEBRIS YEILD (CY)	DEBRIS YEILD (AC-FT)
B	11.61	0.0181	160,000	2,896	1.795
E	36.66	0.0573	160,000	9,168	5.682

Refer to Exhibit "E" for the Developed Conditions Hydrology Study Map.

F. Summary and Conclusion

1.1 Summary

A summary of the results of the rational and unit hydrograph calculations are tabulated below:

Table 14 –Rational Method Calculations Summary

AREA	STORM EVENT	EXISTING CONDITION PEAK Q (CFS)	PROPOSED CONDITION PEAK Q (CFS)	INCREASE (CFS)
A	100	70.7	152.6	-8.0
G	100	89.9		
B	100	18.7	46.0	-4.2
F	100	31.5		
C	100	25.1	34.0	8.9
D	100	30.5	30.5	0.0
E	100	108.5	108.5	0.0

A summary of the results of the unit hydrograph calculations are tabulated below:

Table 15 –Unit Hydrograph Calculations Summary

AREA	STORM EVENT	EXISTING CONDITIONS PEAK Q (CFS)	DEVELOPED CONDITIONS PEAK Q (CFS)	INCREASE (CFS)*	EXISTING CONDITIONS VOLUME (AF)	DEVELOPED CONDITIONS VOLUME (AF)	INCREASE (AF)*
Ex A & G VS Pr A	2	48.67	55.44	**6.77**	1.86	5.92	**4.06**
	10	96.90	93.23	**-3.67**	14.02	12.30	**-1.72**
	25	119.78	114.93	**-4.85**	19.80	16.60	**-3.20**
	100	165.42	154.34	**-11.08**	37.22	30.29	**-6.93**

AREA	STORM EVENT	EXISTING CONDITIONS PEAK Q (CFS)	DEVELOPED CONDITIONS PEAK Q (CFS)	INCREASE (CFS)*	EXISTING CONDITIONS VOLUME (AF)	DEVELOPED CONDITIONS VOLUME (AF)	INCREASE (AF)*
Ex C VS Pr C	2	7.85	10.25	**2.4**	0.27	1.01	**0.74**
	10	15.64	17.33	**1.69**	2.19	2.01	**-0.18**
	25	19.37	21.45	**2.08**	3.11	2.69	**-0.42**
	100	26.79	28.67	**1.88**	5.94	4.95	**-0.99**

1.2 Conclusion

As indicated above, an increase in peak flow and runoff volume is expected due to the proposed development. The increase in flow rates shall be mitigated onsite as to reduce the total site discharge to 90% of the pre-development conditions per the San Bernardino County Hydrology Manual.

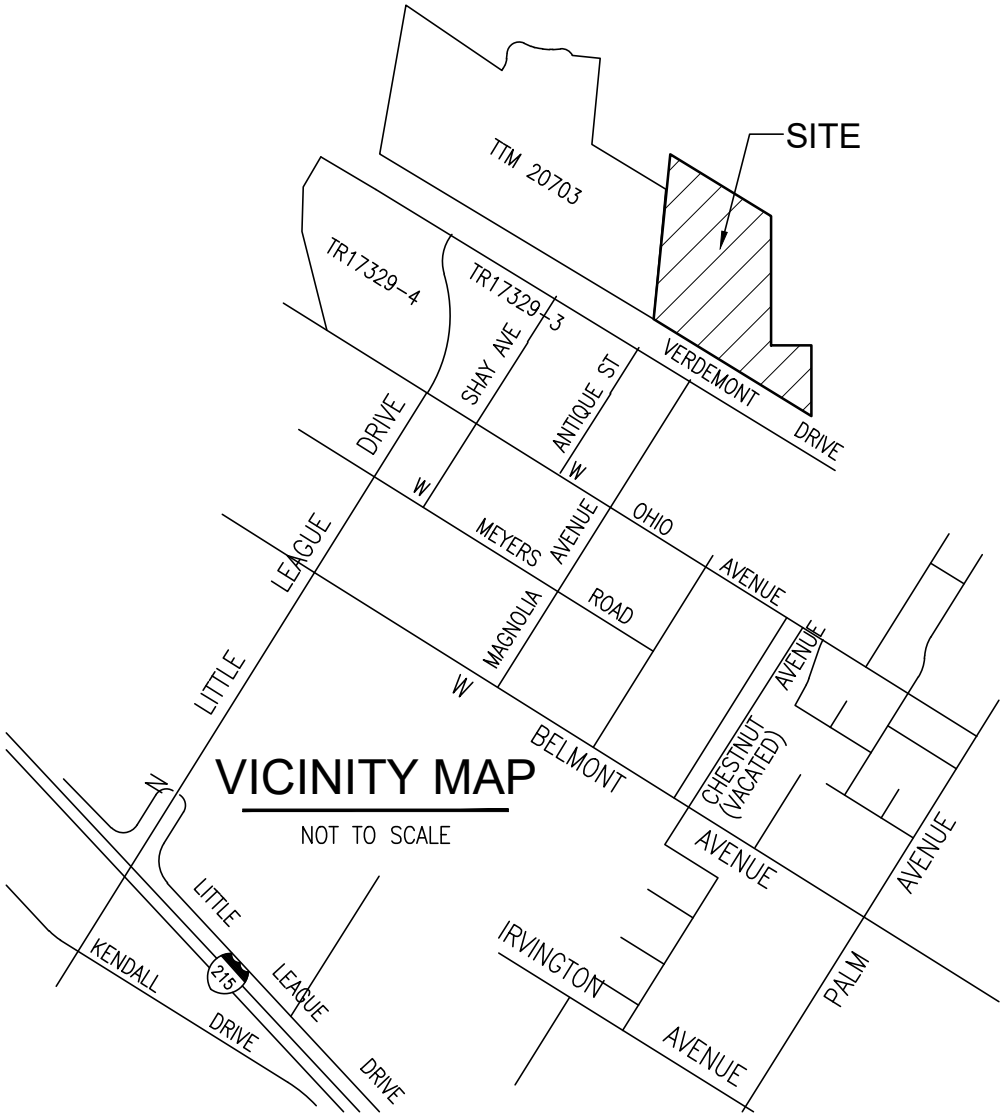
Per the San Bernardino County Hydrology Manual, developed sites shall not increase existing condition flow rate. In order to meet mitigation requirements per "San Bernardino County Detention Basin Design Criteria" post-development peak flow rates generated by the site shall be less than or equal to 90% of the pre-development peak flow rate based on shifting the rainfall values for the 10-year, 25-year and 100-years storms, providing a least a 50% confidence level that the detention basin outflow will not adversely impact downstream properties. This will be achieved with the use of on-site retention and water quality baisns designed to capture, treat for water quality objectives and meter out storm water effluent at or below the existing storm water flow rates.

With the above mitigation measure the development of the project, the site will not have a negative impact on downstream properties or facilities. Refer to project specific WQMP for additional requirements.

(END)

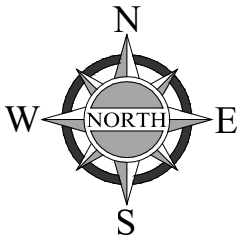
EXHIBIT “A”

Aerial Photo



VICINITY MAP

NOT TO SCALE



NOT TO SCALE

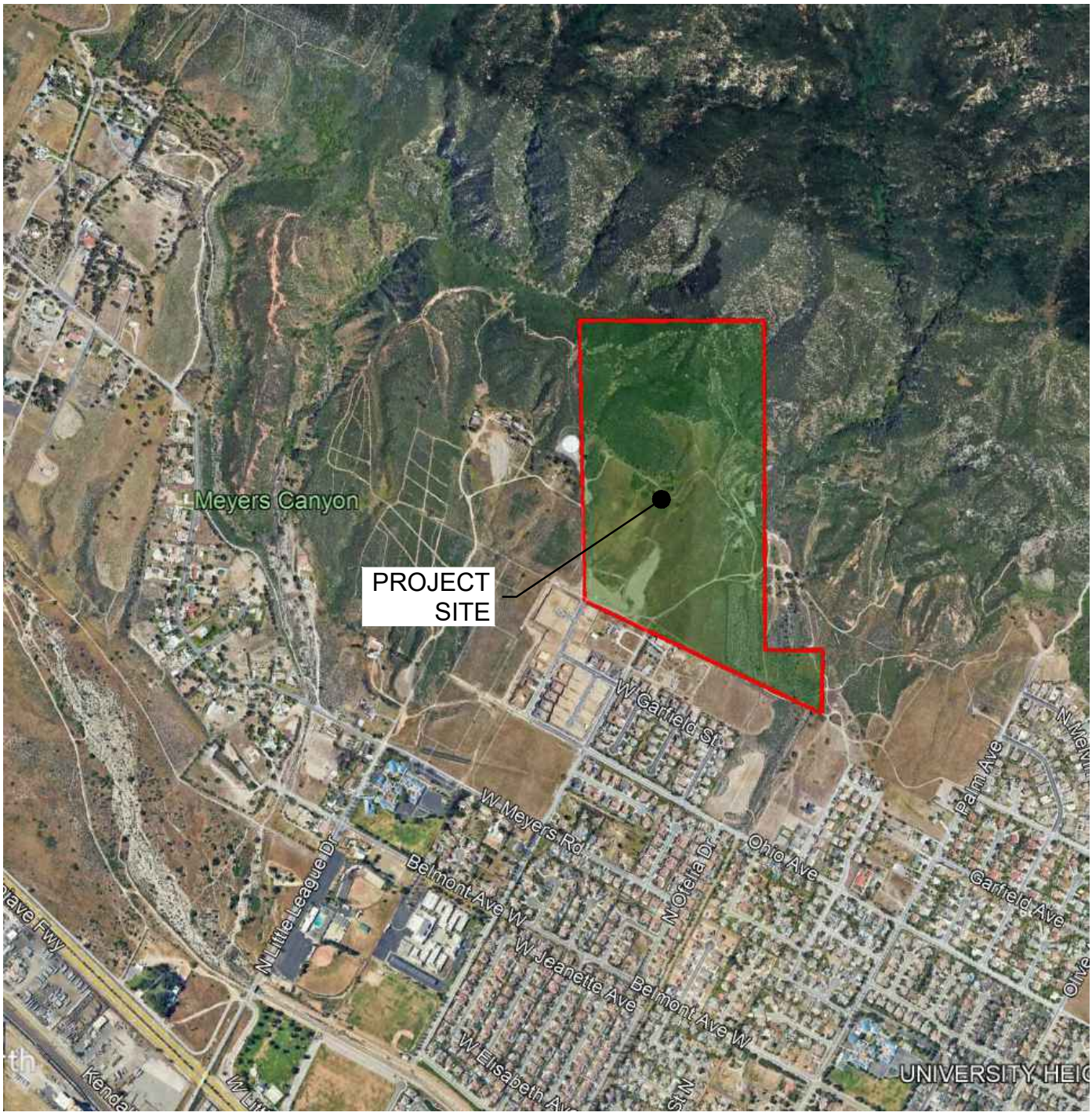
FIGURE 1: VICINITY MAP

SAN BERNARDINO CO.

APN(s): 0348-121-14, -27, -28,
and 0261-011-02, -03 -10

BONADIMAN
JOSEPH E. BONADIMAN & ASSOCIATES, INC.
ENGINEERS • C.I.S. • SURVEYING • PLANNING
TEL. (909) 885-3806
294 NORTH ARROWHEAD AVE.
SAN BERNARDINO, CA 92408
FAX (909) 381-1781
www.bonadiman.com

Drawing2.dwg



N
W NORTH E
S

FIGURE 2: AERIAL PHOTOGRAPH
SAN BERNARDINO CO.

APN(s): 0348-121-14, -27, -28,
and 0261-011-02, -03 -10

NOT TO SCALE

BONADIMAN
JOSEPH E. BONADIMAN & ASSOCIATES, INC.
ENGINEERS • C.I.S. • SURVEYING • PLANNING
TEL. (909) 885-3806
FAX (909) 381-1721

C:\Users\brianl\Desktop\work\00071 – TTM 20707\HYDROLOGY–PRELIM\Parts\Maps\00071–Vicinity–Fig–1.dwg

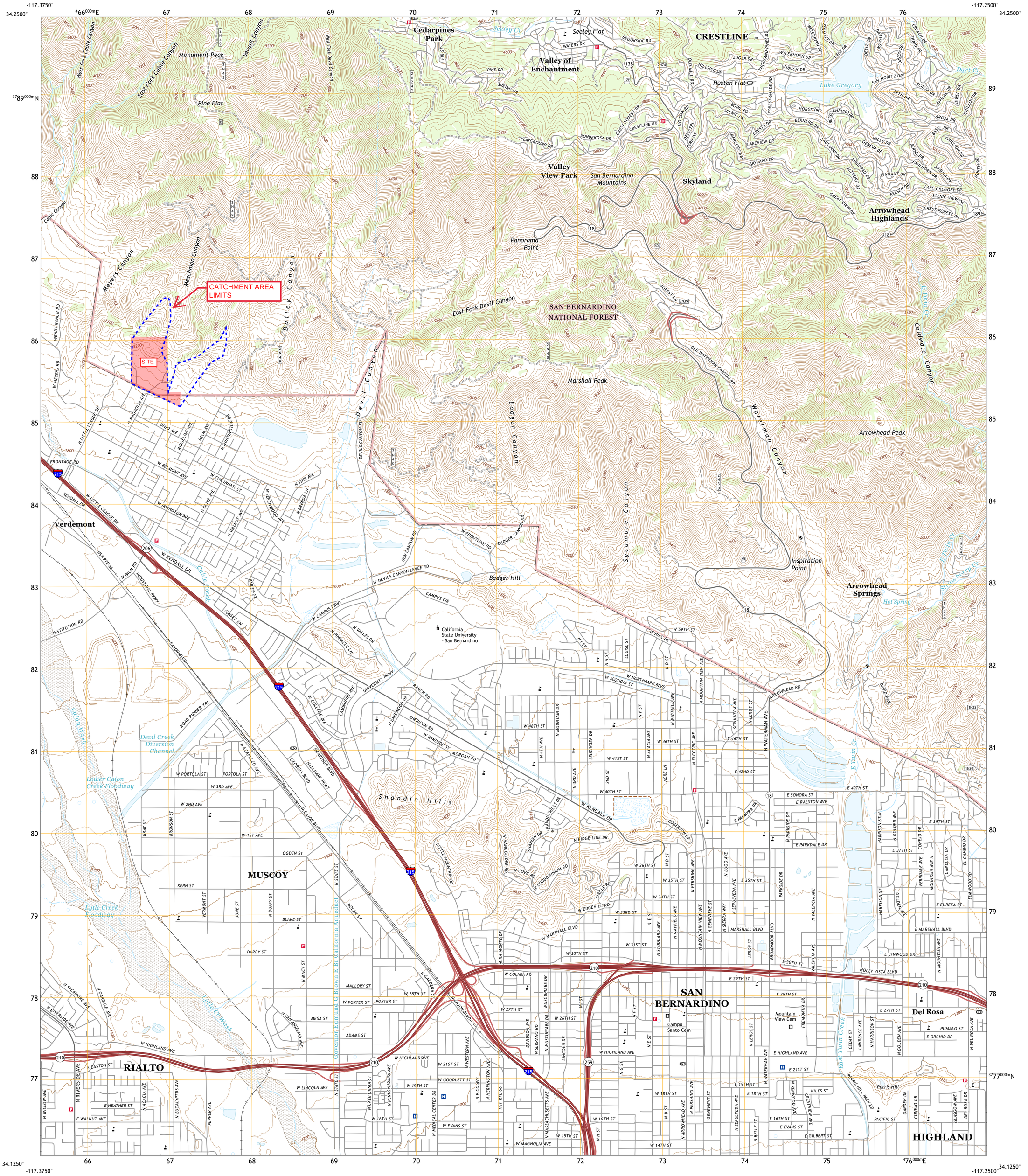
EXHIBIT “B”

Project Watershed
USGS Quadrangle

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

SAN BERNARDINO NORTH QUADRANGLE
CALIFORNIA - SAN BERNARDINO COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 11S

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, April 2020 - April 2020
Roads..... U.S. Census Bureau, 2016 - 2018
Roads within US Forest Service Lands.....FSTopo Data with limited Forest Service updates, 2018
Names.....GNIS, 1981 - 2021
Hydrography.....National Hydrography Dataset, 2001 - 2020
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2017 - 2021
Public Land Survey System.....BLM, 2020
Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
11°44′ 209 MILS
0°11′ 3 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
MT
Grid Zone Designation 11S

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 40 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

CALIFORNIA
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 Cajon
2 Silverwood Lake
3 Lake Arrowhead
4 Devore
5 Harrison Mountain
6 Fontana
7 San Bernardino South
8 Redlands

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route
FS Primary Route
FS Passenger Route
FS High Clearance Route

Check with local Forest Service unit for current travel conditions and restrictions.

SAN BERNARDINO NORTH, CA
2021

NSN 7643016357606
NGA REF NO.USGSX24K71506

EXHIBIT “C”

FEMA FIRM

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11 North. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the San Bernardino County ISD.GIS Department, United States Geological Survey, the Bureau of Land Management, the United States Department of Agriculture, and the National Geodetic Survey. The imagery was flown by U.S. Department of Agriculture Farm Sevice Agency in 2012 and was produced with a 1-meter ground sampling distance.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

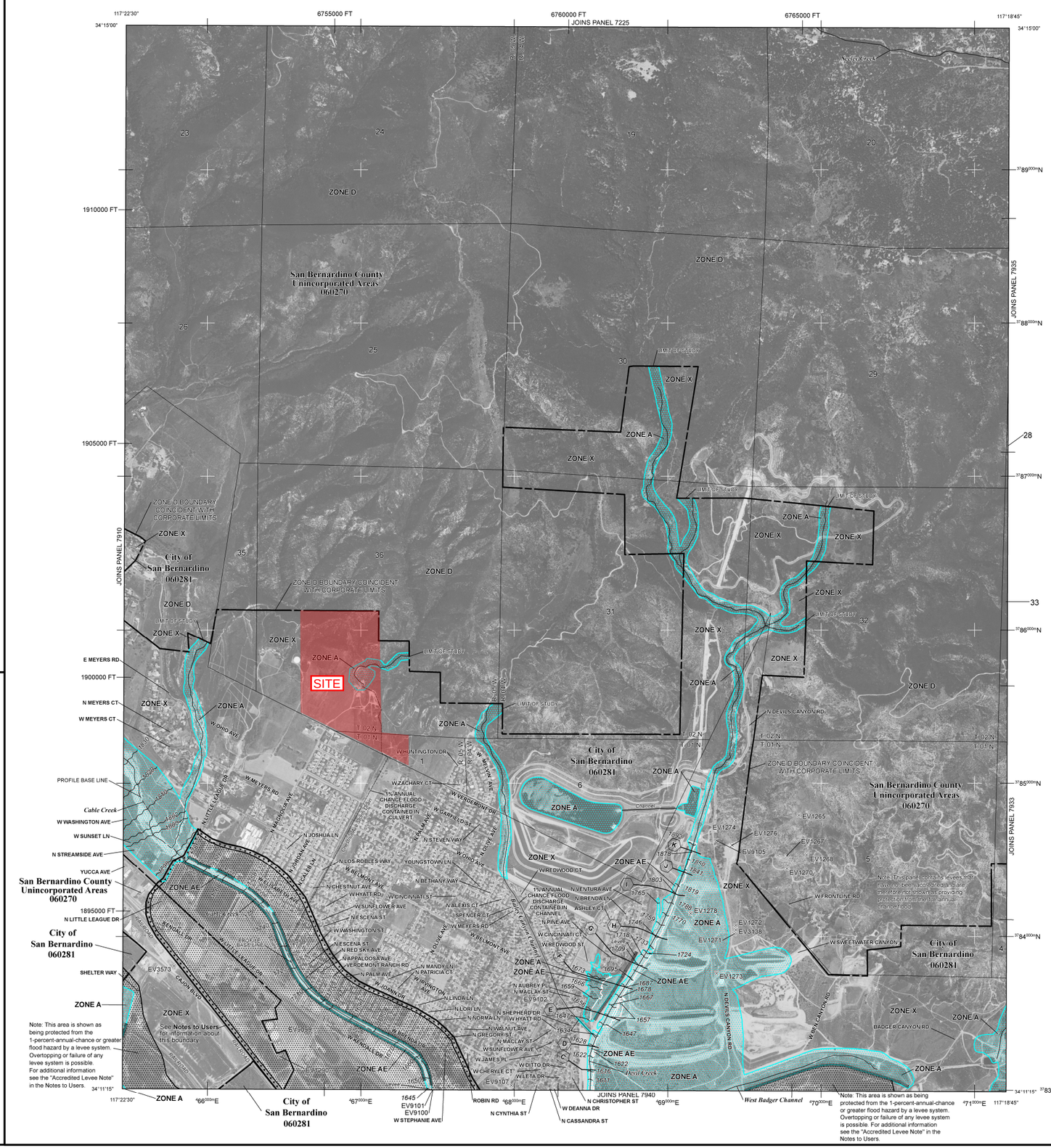
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

ATTENTION: The levee, dike, or other structure that impacts flood hazards inside this boundary has not been shown to comply with Section 65.10 of the NFIP Regulations. As such, this FIRM panel will be revised at a later date to update the flood hazard information associated with this structure.

The flood hazard data inside this boundary on the FIRM panel has been republished from the previous effective (historic) FIRM for this area, after being converted from NGVD29 to NAVD88.

ACCREDITED LEVEE NOTES TO USERS: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA website at http://www.fema.gov/business/nfip/index.shtm.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4775000mE — 1000-meter Universal Transverse Mercator grid values, zone 11
6000000 FT — 5000-foot grid ticks: California State Plane coordinate system, Zone V (FIPSZONE = 405), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories List on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
August 28, 2008

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
September 2, 2016 – to change Base Flood Elevations, to add Base Flood Elevations, to change Special Flood Hazard Areas, to change zone designations, to incorporate previously issued Letters of Map Revision, and to reflect updated topographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 500 1,000 1,500 2,000 FEET
300 0 300 600 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 7930J

FIRM

FLOOD INSURANCE RATE MAP

SAN BERNARDINO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 7930 OF 9400

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SAN BERNARDINO COUNTY	060270	7930	J
SAN BERNARDINO, CITY OF	060281	7930	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06071C7930J

MAP REVISED
SEPTEMBER 2, 2016

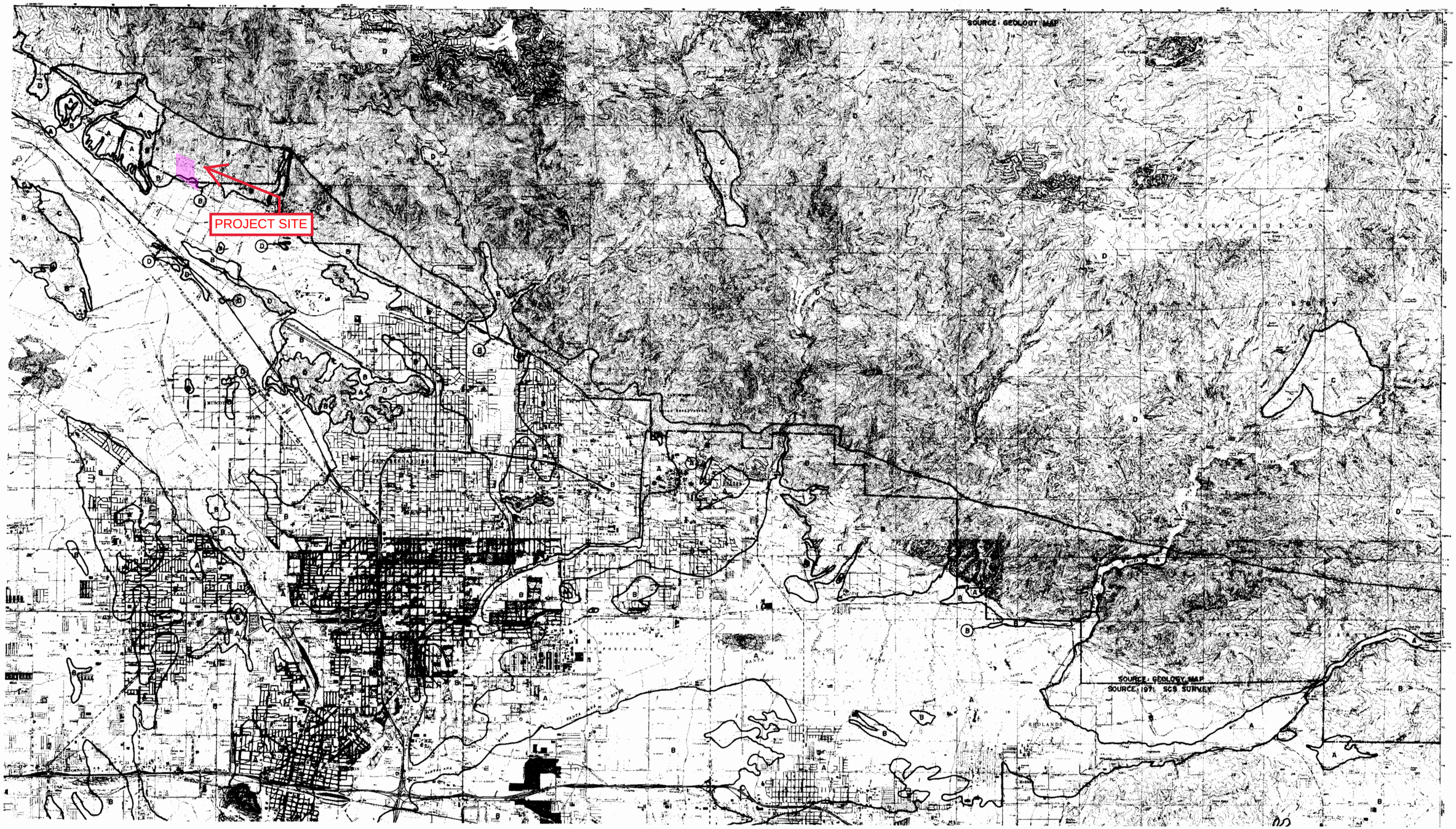
Federal Emergency Management Agency

EXHIBIT “D”

San Bernardino County
Hydrology Manual
Rainfall Map

EXHIBIT “E”

San Bernardino County Hydrology Manual
and NRCS Soils Data



SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

SCALE REDUCED BY 1/2

HYDROLOGIC SOILS GROUP MAP
FOR
SOUTHWEST-B AREA

FIGURE C-14

PROJECT SITE
2Y 6H = 2.0 IN

REDUCED DRAWING
SCALE 1" = 4 MILES

LEGEND:
2.0 ISOLINES PRECIPITATION (INCHES)

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

VALLEY AREA
ISOHYETALS
X_1 - 2 YEAR 6 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973

APPROVED BY
FLOOD CONTROL ENGINEER

DATE	SCALE	FILE NO.	DRWG. NO.
1982	1"=2 MI.		1 of 12

FIGURE B-1

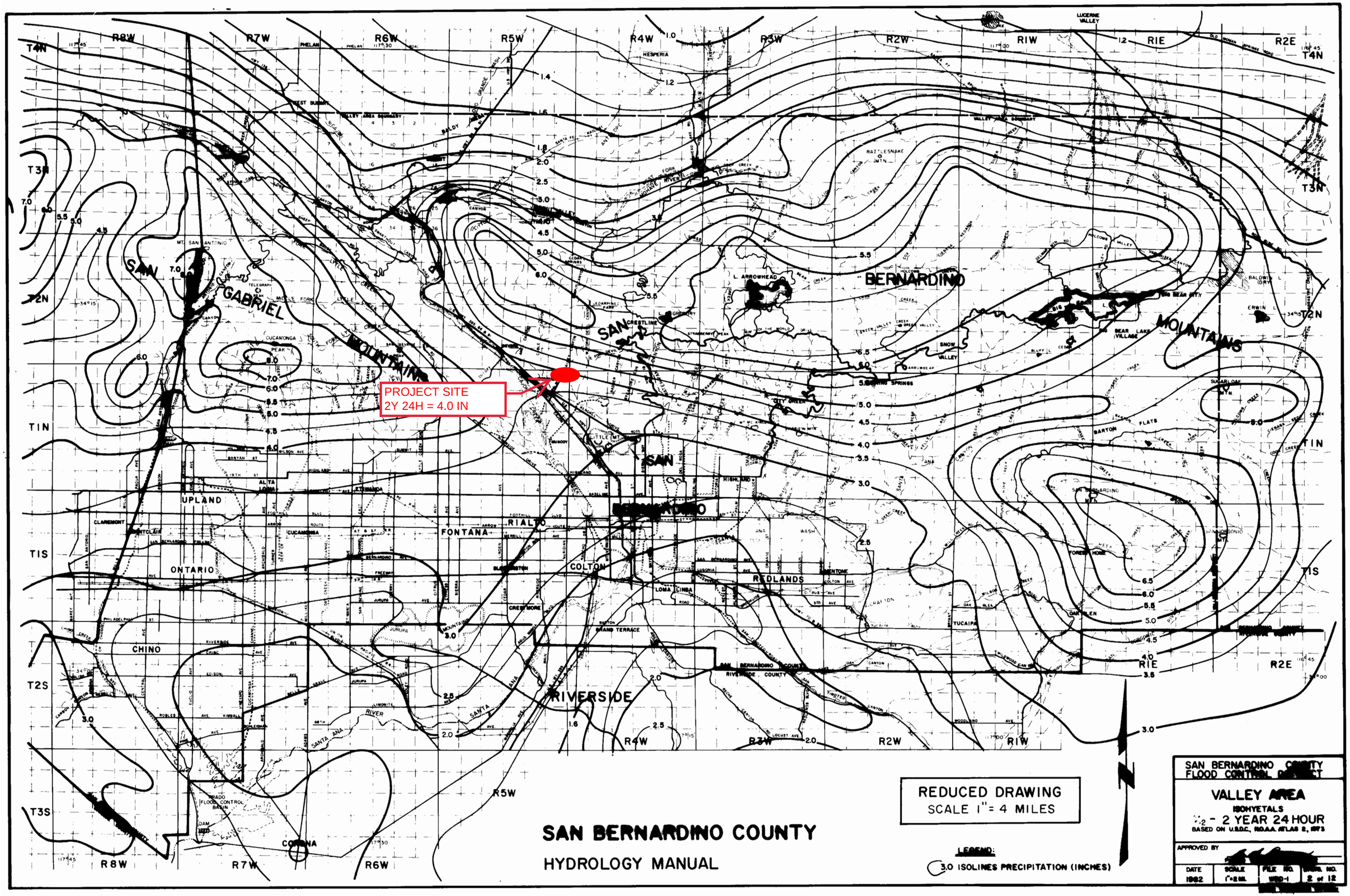
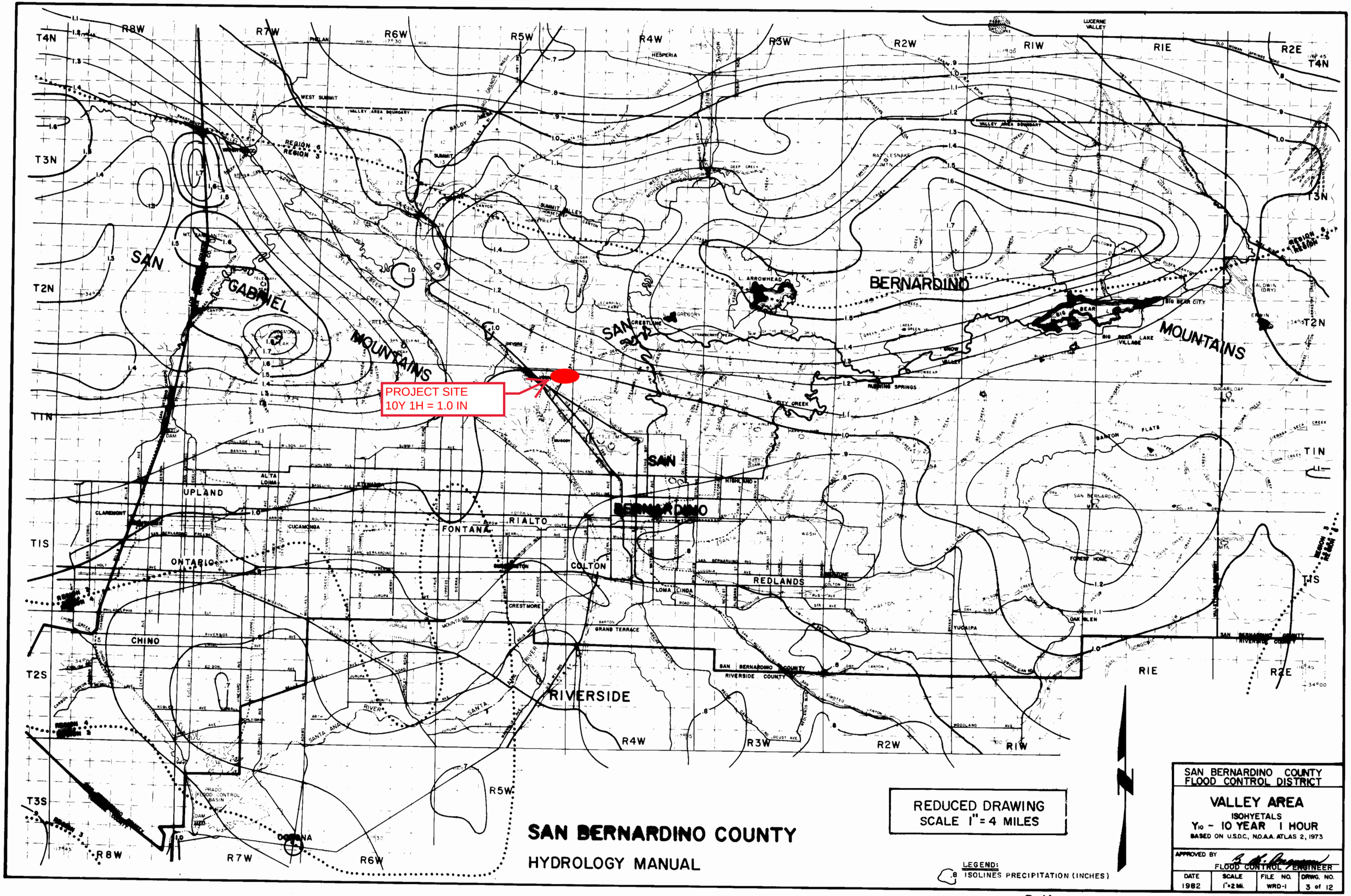

PROJECT SITE
2Y 24H = 4.0 IN
SAN GABRIEL MOUNTAINS
SAN BERNARDINO MOUNTAINS
SAN BERNARDINO
RIVERSIDE
UPLAND
ONTARIO
CHINO
FONTANA
RIALTO
COLTON
REDLANDS
CORONA
L. ARROWHEAD
BIG BEAR LAKE VILLAGE
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT
VALLEY AREA
ISOHYETALS
2 YEAR 24 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973
APPROVED BY
DATE
1982
SCALE
1"=2 MI.
FILE NO.
WRD-1
DWG. NO.
2 of 12
REDUCED DRAWING
SCALE 1" = 4 MILES
LEGEND:
3.0 ISOLINES PRECIPITATION (INCHES)
SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

FIGURE B-2



SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

REDUCED DRAWING
SCALE 1" = 4 MILES

LEGEND:
.8 ISOLINES PRECIPITATION (INCHES)

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

VALLEY AREA
ISOHYETALS
Y_{10} - 10 YEAR 1 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973

APPROVED BY _____ FLOOD CONTROL ENGINEER

DATE	SCALE	FILE NO.	DRWG. NO.
1982	1"=2 Mi.	WRD-1	3 of 12

FIGURE B-3

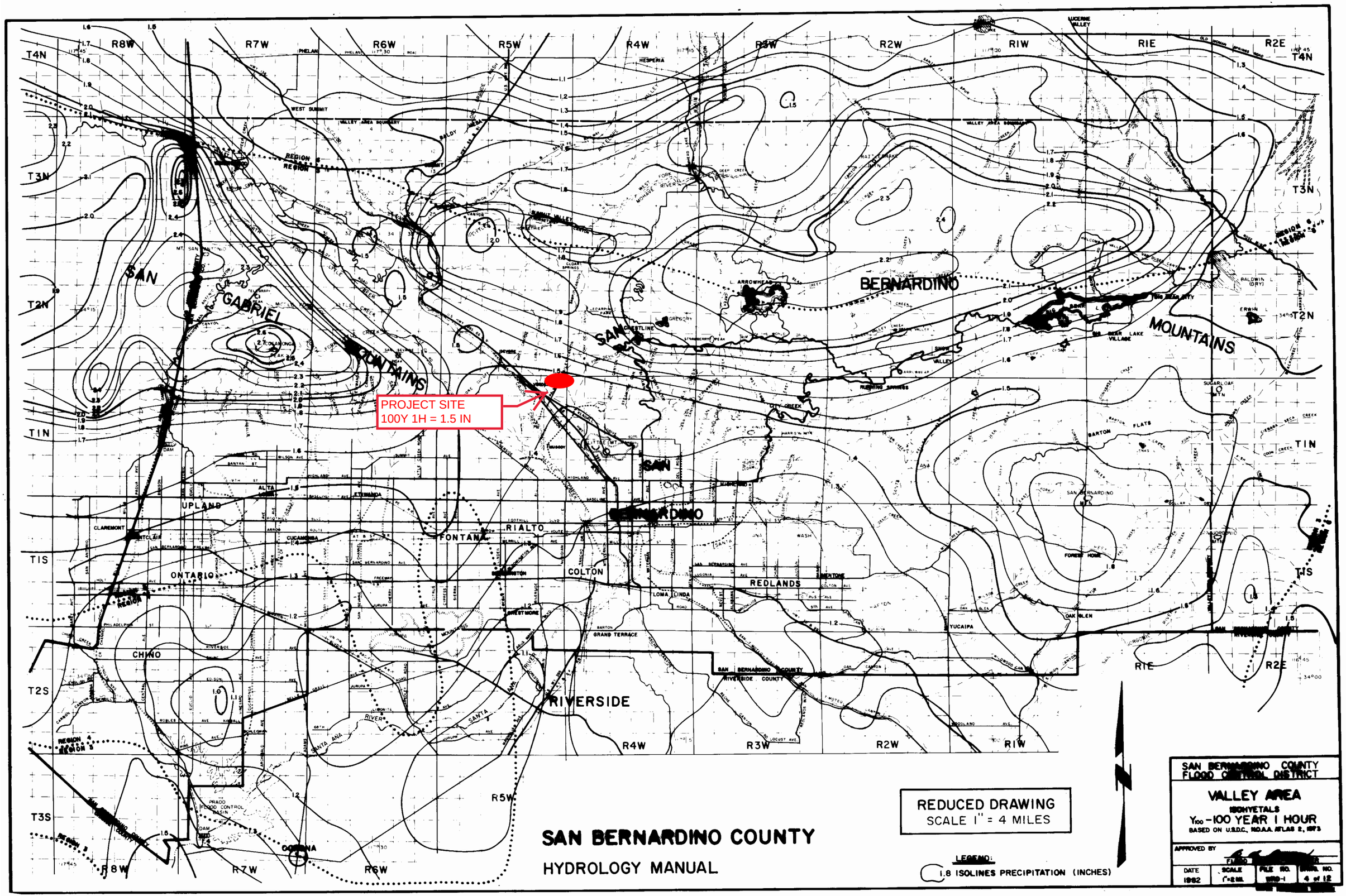

PROJECT SITE
100Y 1H = 1.5 IN
SAN BERNARDINO COUNTY
HYDROLOGY MANUAL
REDUCED DRAWING
SCALE 1" = 4 MILES
LEGEND:
1.8 ISOLINES PRECIPITATION (INCHES)
SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT
VALLEY AREA
ISOHYETALS
Y100 -100 YEAR 1 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973
APPROVED BY
DATE
1982
SCALE
1"=2 MI.
FILE NO.
DRWG. NO.
4 of 12
SAN GABRIEL MOUNTAINS
SAN BERNARDINO MOUNTAINS
UPLAND
ONTARIO
CHINO
FONTANA
RIALTO
COLTON
REDLANDS
RIVERSIDE
CORONA
YUCAIPA
GRAND TERRACE
LOMA LINDA
CLAREMONT
CUCAMONGA
ALTA LOMA
ETIWANDA
HESPERIA
WEST SUMMIT
L. ARROWHEAD
BIG BEAR LAKE VILLAGE
BARTON FLATS
SAN BERNARDINO
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
PRADO FLOOD CONTROL BASIN
T4N
T3N
T2N
T1N
T1S
T2S
T3S
R8W
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E

FIGURE B-4

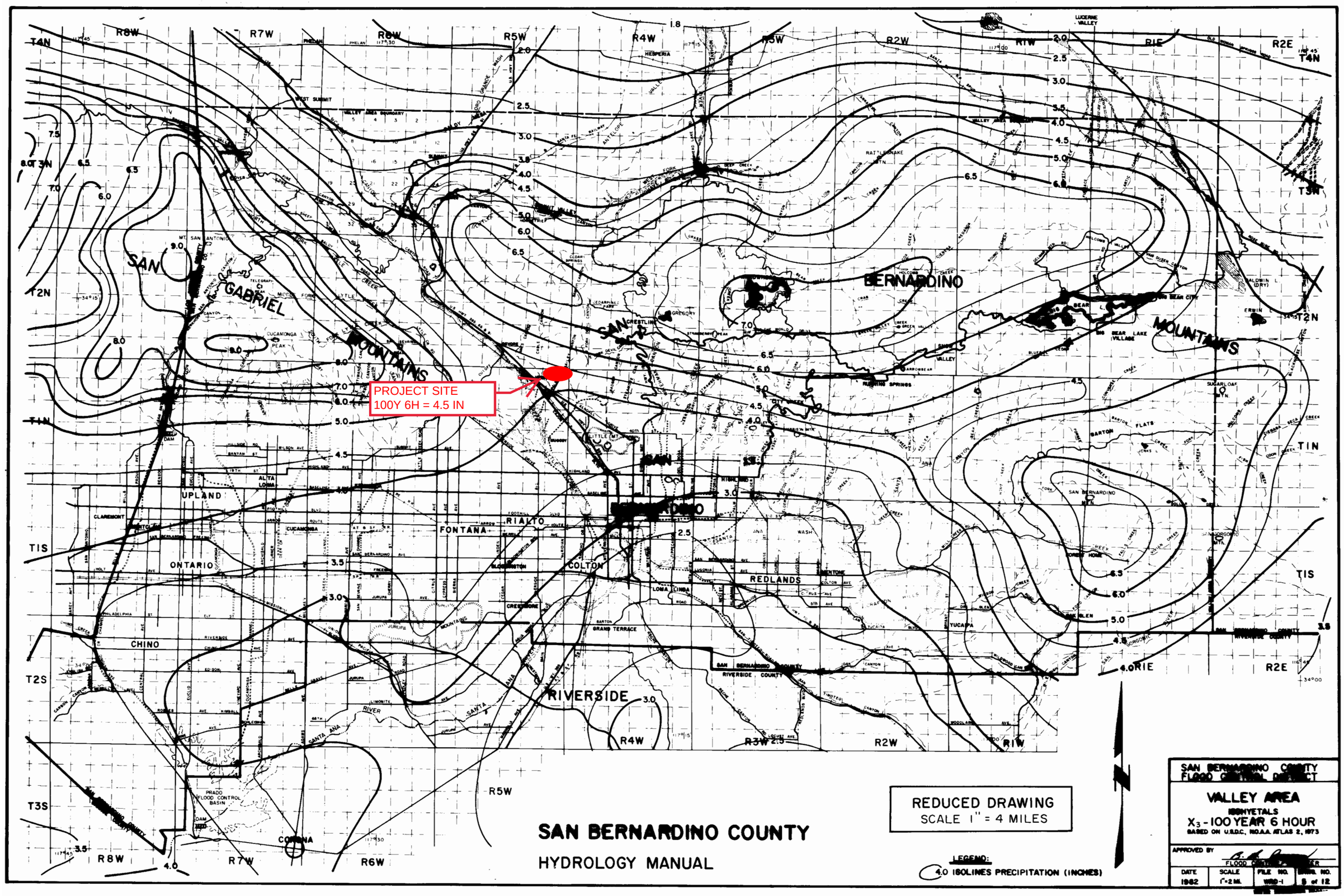

PROJECT SITE
100Y 6H = 4.5 IN
SAN BERNARDINO COUNTY
HYDROLOGY MANUAL
REDUCED DRAWING
SCALE 1" = 4 MILES
LEGEND:
4.0 ISOLINES PRECIPITATION (INCHES)
SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
VALLEY AREA
ISOHYETALS
X3 - 100 YEAR 6 HOUR
BASED ON U.S.D.C., NOAA ATLAS 2, 1973
APPROVED BY
DATE 1982
SCALE 1"=2 MI.
FILE NO. WRD-1
SHEET NO. 8 of 12

FIGURE B-5

PROJECT SITE
100Y 24H = 12.0 IN

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

REDUCED DRAWING
SCALE 1" = 4 MILES

LEGEND:
6.0 ISOLINES PRECIPITATION (INCHES)

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

VALLEY AREA
ISOHYETALS
X_t - 100 YEAR 24 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973

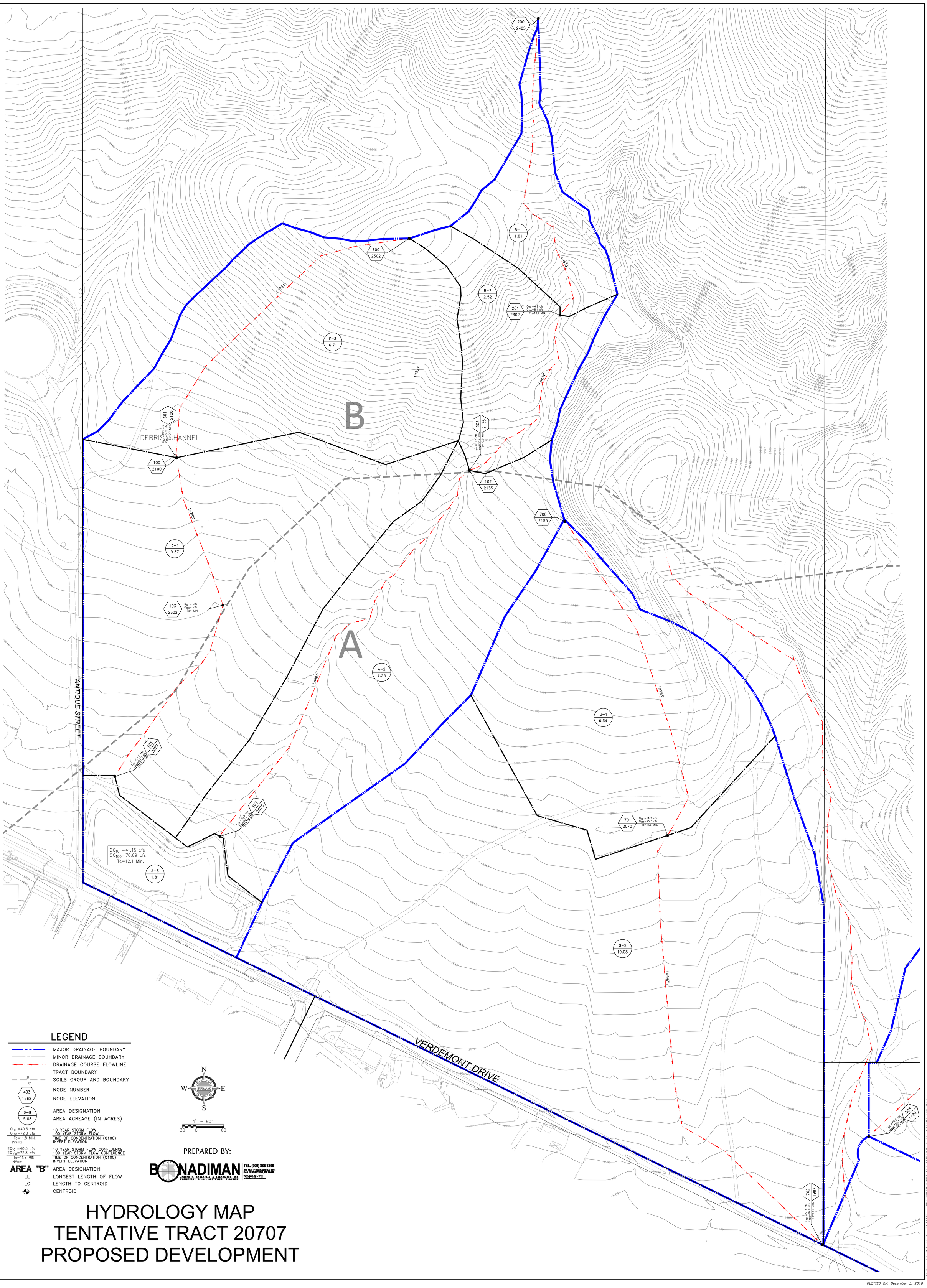
APPROVED BY _____
FLOOD CONTROL ENGINEER

DATE	SCALE	FILE NO.	DRWG. NO.
1982	1"=2 MI.	WRD-1	6 of 12

FIGURE B-6

EXHIBIT “F”

Existing Hydrologic Conditions
Study Map



LEGEND

- MAJOR DRAINAGE BOUNDARY
- MINOR DRAINAGE BOUNDARY
- DRAINAGE COURSE FLOWLINE
- TRACT BOUNDARY
- B / C — SOILS GROUP AND BOUNDARY
- 403 / 1262 — NODE NUMBER / NODE ELEVATION
- D-9 / 5.08 — AREA DESIGNATION / AREA ACREAGE (IN ACRES)
- Q_{10} =40.5 cfs / Q_{100}=72.8 cfs / Tc=11.8 MIN. / INV=x — 10 YEAR STORM FLOW / 100 YEAR STORM FLOW / TIME OF CONCENTRATION (Q100) / INVERT ELEVATION
- ΣQ_{10} =40.5 cfs / ΣQ_{100}=72.8 cfs / Tc=11.8 MIN. / INV=x — 10 YEAR STORM FLOW CONFLUENCE / 100 YEAR STORM FLOW CONFLUENCE / TIME OF CONCENTRATION (Q100) / INVERT ELEVATION
- AREA "B" — AREA DESIGNATION
- LL — LONGEST LENGTH OF FLOW
- LC — LENGTH TO CENTROID
- CENTROID

N W HUNSAKER E S

1" = 60'
30 0 60

PREPARED BY:

BONADIMAN
JOSEPH E. BONADIMAN & ASSOCIATES, INC.
ENGINEERING • G.I.S. • SURVEYING • PLANNING
TEL. (909) 885-3806
384 NORTH ARROWHEAD AVE.
SAN BERNARDINO, CA 92408
FAX (909) 381-1721
www.bonadiman.com

HYDROLOGY MAP
TENTATIVE TRACT 20707
PROPOSED DEVELOPMENT

C:\Users\brian\Desktop\work\00071 - TTM 20707\HYDROLOGY-PRELIM\Parts\Maps\00071-HYD-EX.dwg

PLOTTED ON: December 5, 2016

MATCHLINE SEE LEFT

MATCHLINE SEE RIGHT

500
2270

E-1
2.57

L=907'

501
2200
Q_{10} =5.7 cfs
Q_{100}=9.6 cfs
Tc=13.4 MIN.

E-2
13.16

L=1082'

502
2100
Q_{10} =30.5 cfs
Q_{100}=53.1 cfs
Tc=15.4 MIN.

400
2090

E-3
20.93

L=1750'

A

B

D-1
2.50

L=800'

401
2050
Q_{10} =5.2 cfs
Q_{100}=9.0 cfs
Tc=13.9 MIN.

DEBRIS CHANNEL

300
2040

D-2
7.02

L=901'

503
1196
Q_{10} =69.2 cfs
Q_{100}=120.1 cfs
Tc=16.6 MIN.

C-1
6.53

L=984'

702
1987
Q_{10} =81.1 cfs
Q_{100}=139.3 cfs
Tc=13.7 MIN.

301
1960
Q_{10} =11.3 cfs
Q_{100}=20.4 cfs
Tc=13.5 MIN.

402
1965
Q_{10} =16.9 cfs
Q_{100}=29.2 cfs
Tc=13.7 MIN.

LEGEND

- MAJOR DRAINAGE BOUNDARY
- MINOR DRAINAGE BOUNDARY
- DRAINAGE COURSE FLOWLINE
- TRACT BOUNDARY
- B / C — SOILS GROUP AND BOUNDARY
- 403 / 1262 — NODE NUMBER / NODE ELEVATION
- D-9 / 5.08 — AREA DESIGNATION / AREA ACREAGE (IN ACRES)
- Q_{10} =40.5 cfs, Q_{100}=72.8 cfs, Tc=11.8 MIN., INV=x — 10 YEAR STORM FLOW / 100 YEAR STORM FLOW / TIME OF CONCENTRATION (Q100) / INVERT ELEVATION
- ΣQ_{10} =40.5 cfs, ΣQ_{100}=72.8 cfs, Tc=11.8 MIN., INV=x — 10 YEAR STORM FLOW CONFLUENCE / 100 YEAR STORM FLOW CONFLUENCE / TIME OF CONCENTRATION (Q100) / INVERT ELEVATION
- AREA "B" — AREA DESIGNATION
- LL — LONGEST LENGTH OF FLOW
- LC — LENGTH TO CENTROID
- CENTROID

N W E S HUNSAKER

1" = 60'
30 0 60

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264 NORTH ARROWHEAD AVE.
SAN BERNARDINO, CA 92408
FAX (909) 381-1721
www.bonadiman.com

HYDROLOGY MAP
TENTATIVE TRACT 20707
PROPOSED DEVELOPMENT

PLOTTED ON: December 5, 2016

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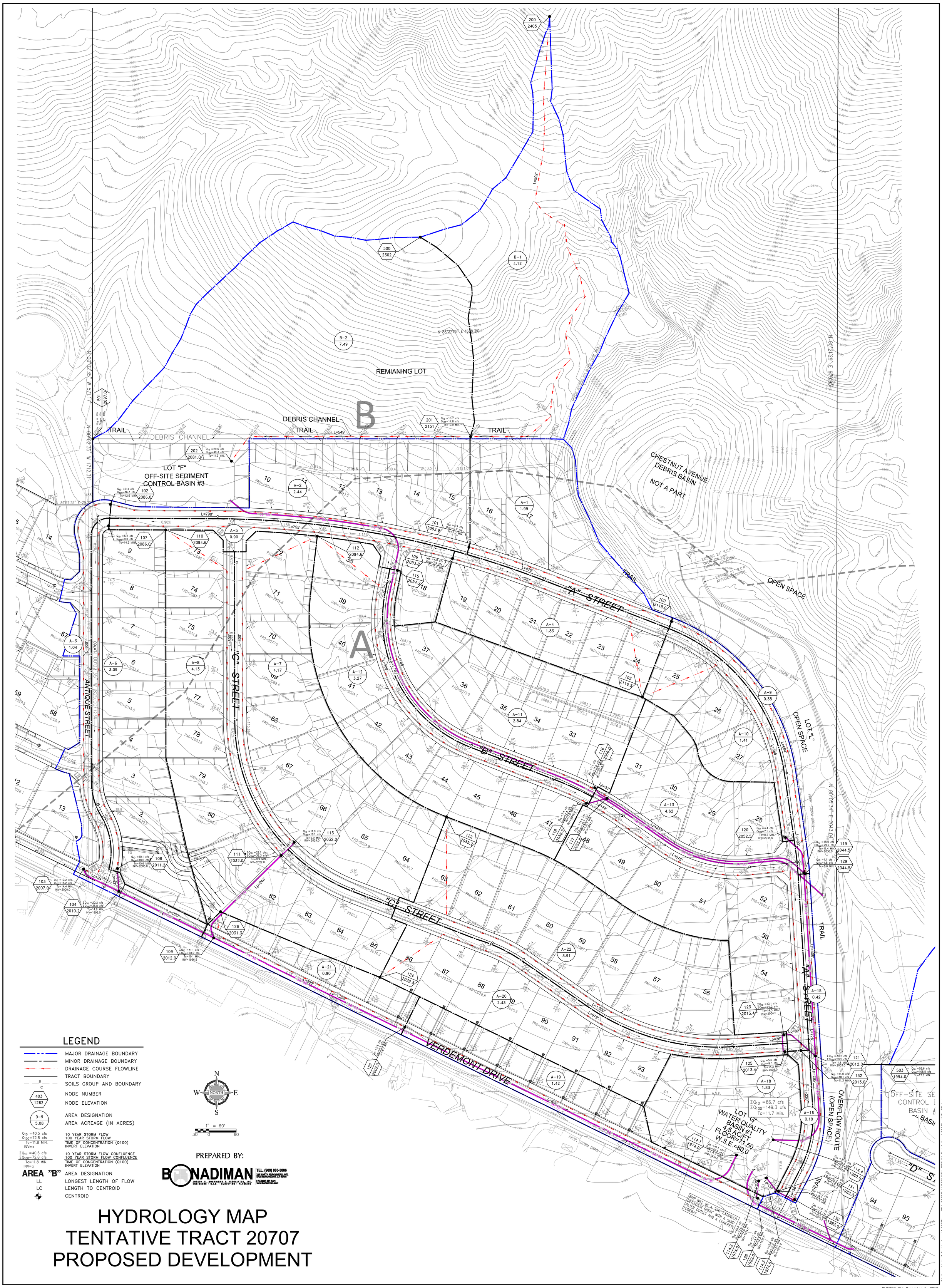
EXHIBIT “G”

Developed Hydrologic Conditions
Study Map



LEGEND

- MAJOR DRAINAGE BOUNDARY
- MINOR DRAINAGE BOUNDARY
- DRAINAGE COURSE FLOWLINE
- TRACT BOUNDARY
- B / C — SOILS GROUP AND BOUNDARY
- 403 / 1262 — NODE NUMBER / NODE ELEVATION
- D-9 / 5.08 — AREA DESIGNATION / AREA ACREAGE (IN ACRES)
- Q_{10} = 40.5 cfs / Q_{100} = 72.8 cfs — 10 YEAR STORM FLOW / 100 YEAR STORM FLOW
  Tc=11.8 MIN. — TIME OF CONCENTRATION (Q100)
  INV=x — INVERT ELEVATION
- ΣQ_{10} = 40.5 cfs / ΣQ_{100} = 72.8 cfs — 10 YEAR STORM FLOW CONFLUENCE / 100 YEAR STORM FLOW CONFLUENCE
  Tc=11.8 MIN. — TIME OF CONCENTRATION (Q100)
  INV=x — INVERT ELEVATION
- **AREA "B"** — AREA DESIGNATION
- LL — LONGEST LENGTH OF FLOW
- LC — LENGTH TO CENTROID
- CENTROID

N / W NORTH E / S

1" = 60'
30 0 60

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HYDROLOGY MAP
TENTATIVE TRACT 20707
PROPOSED DEVELOPMENT

PLOTTED ON: December 5, 2016

C:\Users\brian\Desktop\work\00071 - TTM 20707\HYDROLOGY-PRELIM\Plots\Maps\00071-HYD-PR.dwg

MATCHLINE SEE RIGHT

MATCHLINE SEE LEFT

500
2270

E-1
2.57

L=907'

501
2200
Q_{10} =5.7 cfs
Q_{100}=9.6 cfs
Tc=13.4 MIN.

E-2
13.16

L=1082'

502
2100
Q_{10} =30.5 cfs
Q_{100}=53.1 cfs
Tc=15.4 MIN.

400
2090

B

A

E-3
20.93

L=1570'

D-1
2.50

L=880'

D-2
7.02

L=901'

119
2044.5
ΣQ_{10} =18.0 cfs
ΣQ_{100}=29.2 cfs
Tc=11.4 MIN.
INV=2036.0

129
2044.5
Q_{10} =1.1 cfs
Q_{100}=1.8 cfs
Tc=8.6 MIN.

N 00°05'34" E 2043.04'

PROP. STORM DRAIN

TRAIL

L=1400'

A-15
0.42

L=726'

L=326'

A-16
0.19

OVERFLOW ROUTE (OPEN SPACE)

121
2012.0
ΣQ_{10} =30.2 cfs
ΣQ_{100}=50.5 cfs
Tc=11.8 MIN.
INV=2003.0

132
2013.0
Q_{10} =11.0 cfs
Q_{100}=18.1 cfs
Tc=11.3 MIN.

503
1994.0
Q_{10} =59.6 cfs
Q_{100}=108.5 cfs
Tc=17.6 MIN.

DEBRIS CHANNEL

N 89°47'00" W 638.23'

DEBRIS CHANNEL

OFF-SITE SEDIMENT CONTROL BASIN #4

SEDIMENT BASIN #4

300
2041

103
PAD=2022.0

102
PAD=2022.0

101
PAD=2017.5

100
PAD=2001.7

105
PAD=2000.1

104
PAD=1999.1

C-1
6.54

"F" STREET

"D" STREET

114.4
1980.0
ΣQ_{10} =32.2 cfs
ΣQ_{100}=58.4 cfs
Tc=10.5 MIN.
INV=1974.8

131
1983.0
ΣQ_{10} =21.8 cfs
ΣQ_{100}=39.4 cfs
Tc=11.0 MIN.
INV=1974.5

130
1983.0
Q_{10} =11.0 cfs
Q_{100}=19.9 cfs
Tc=11.9 MIN.
INV=1974.5

Q_{10} =1.9 cfs
Q_{100}=3.3 cfs
Tc=10.5 MIN.
INV=1975.3

94
PAD=2000.0

95
PAD=1999.0

96
PAD=1998.0

97
PAD=1997.0

98
PAD=1996.3

99
PAD=1997.4

LOT "J" WATER QUALITY BASIN #2

0.95 AC/FT
FLOOR=54.7'
W.S.E.

WATER QUALITY BASIN #2

BMP WILL BE A "DRY EXTENDED DETENTION BASIN" WITH A SAND FILTER, OUTLET AND A CONCRETE FOREBAY

KEYSTONE TYPE WALL H=8' MAX. 2' MIN.

EXIST. STORM DRAIN

401
2050
Q_{10} =5.2 cfs
Q_{100}=9.0 cfs
Tc=13.9 MIN.

D-2
7.02

301
1965
Q_{10} =18.7 cfs
Q_{100}=35.4 cfs
Tc=11.1 MIN.
INV=1957.0

302
1956

402
1955
Q_{10} =16.8 cfs
Q_{100}=31.8 cfs
Tc=11.7 MIN.

LEGEND

	MAJOR DRAINAGE BOUNDARY
	MINOR DRAINAGE BOUNDARY
	DRAINAGE COURSE FLOWLINE
	TRACT BOUNDARY
B / C	SOILS GROUP AND BOUNDARY
403 / 1262	NODE NUMBER / NODE ELEVATION
D-9 / 5.08	AREA DESIGNATION / AREA ACREAGE (IN ACRES)
Q_{10} =40.5 cfs, Q_{100}=72.8 cfs, Tc=11.8 MIN., INV=x	10 YEAR STORM FLOW / 100 YEAR STORM FLOW, TIME OF CONCENTRATION (Q100), INVERT ELEVATION
ΣQ_{10} =40.5 cfs, ΣQ_{100}=72.8 cfs, Tc=11.8 MIN., INV=x	10 YEAR STORM FLOW CONFLUENCE / 100 YEAR STORM FLOW CONFLUENCE, TIME OF CONCENTRATION (Q100), INVERT ELEVATION
AREA "B"	AREA DESIGNATION
LL	LONGEST LENGTH OF FLOW
LC	LENGTH TO CENTROID
	CENTROID

N
W NORTH E
S

1" = 60'
30 0 60

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HYDROLOGY MAP
TENTATIVE TRACT 20707
PROPOSED DEVELOPMENT

PLOTTED ON: December 5, 2016

C:\Users\brian\Desktop\work\20071 - TTM 20707\HYDROLOGY-PRELIM\Parts\Maps\20071-HYD-PR.dwg

Attachment 1

Existing Conditions
Rational Method Calculations

Area 'A' – 10 Year 1 Hour - Existing Condition – Rational Method

```
              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/14/24
-----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'A'
10 YEAR STORM
NOVEMBER 4, 2024
-----------------------------------------------------------------------


Program License Serial Number 6407

-----------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      101.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 72.50
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.493(In/Hr)
Initial subarea data:
Initial area flow distance =   789.000(Ft.)
Top (of initial area) elevation =  2100.000(Ft.)
Bottom (of initial area) elevation =  2025.000(Ft.)
Difference in elevation =    75.000(Ft.)
Slope =    0.09506  s(%)=       9.51
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.117 min.
Rainfall intensity =      3.064(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.755
Subarea runoff =     21.682(CFS)
Total initial stream area =        9.370(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.493(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      101.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      9.370(Ac.)
Runoff from this stream =     21.682(CFS)
Time of concentration =   12.12 min.
Rainfall intensity =     3.064(In/Hr)
Area averaged loss rate (Fm) =    0.4932(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
```

```
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.950
Decimal fraction soil group B = 0.050
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.55
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.570(In/Hr)
Initial subarea data:
Initial area flow distance =   997.000(Ft.)
Top (of initial area) elevation =  2135.000(Ft.)
Bottom (of initial area) elevation =  2025.000(Ft.)
Difference in elevation =   110.000(Ft.)
Slope =    0.11033  s(%)=      11.03
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.915 min.
Rainfall intensity =      2.930(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.725
Subarea runoff =     15.572(CFS)
Total initial stream area =        7.330(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.570(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** CONFLUENCE OF MINOR STREAMS ****
_____________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      7.330(Ac.)
Runoff from this stream =     15.572(CFS)
Time of concentration =   12.92 min.
Rainfall intensity =     2.930(In/Hr)
Area averaged loss rate (Fm) =    0.5700(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     21.68     9.370     12.12    0.493      3.064
2     15.57     7.330     12.92    0.570      2.930
Qmax(1) =
          1.000 *    1.000 *    21.682) +
          1.057 *    0.938 *    15.572) + =      37.120
Qmax(2) =
          0.948 *    1.000 *    21.682) +
          1.000 *    1.000 *    15.572) + =      36.125

Total of 2 streams to confluence:
Flow rates before confluence point:
      21.682      15.572
Maximum flow rates at confluence using above data:
       37.120       36.125
Area of streams before confluence:
        9.370        7.330
Effective area values after confluence:
       16.247       16.700
Results of confluence:
Total flow rate =     37.120(CFS)
Time of concentration =    12.117 min.
Effective stream area after confluence =     16.247(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.527(In/Hr)
Study area total (this main stream) =      16.70(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      103.100
```

```
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.578(In/Hr)
Time of concentration =    12.12 min.
Rainfall intensity =      3.064(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.744
Subarea runoff =      4.032(CFS) for    1.810(Ac.)
Total runoff =     41.152(CFS)
Effective area this stream =       18.06(Ac.)
Total Study Area (Main Stream No. 1) =       18.51(Ac.)
Area averaged Fm value =    0.532(In/Hr)
End of computations, Total Study Area =           18.51 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  70.0
```

Area 'A' – 100 Year 1 Hour - Existing Condition – Rational Method

```
                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/14/24
------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'A'
100 YEAR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      101.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 72.50
Adjusted SCS curve number for AMC 3 = 89.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.211(In/Hr)
Initial subarea data:
Initial area flow distance =   789.000(Ft.)
Top (of initial area) elevation =  2100.000(Ft.)
Bottom (of initial area) elevation =  2025.000(Ft.)
Difference in elevation =    75.000(Ft.)
Slope =    0.09506  s(%)=       9.51
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.117 min.
Rainfall intensity =      4.596(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.859
Subarea runoff =     36.984(CFS)
Total initial stream area =        9.370(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.211(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      101.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      9.370(Ac.)
Runoff from this stream =     36.984(CFS)
Time of concentration =   12.12 min.
Rainfall intensity =     4.596(In/Hr)
Area averaged loss rate (Fm) =    0.2108(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
```

```
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.950
Decimal fraction soil group B = 0.050
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.55
Adjusted SCS curve number for AMC 3 = 85.04
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.282(In/Hr)
Initial subarea data:
Initial area flow distance =   997.000(Ft.)
Top (of initial area) elevation =  2135.000(Ft.)
Bottom (of initial area) elevation =  2025.000(Ft.)
Difference in elevation =   110.000(Ft.)
Slope =    0.11033  s(%)=      11.03
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.915 min.
Rainfall intensity =      4.396(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.842
Subarea runoff =     27.137(CFS)
Total initial stream area =        7.330(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.282(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** CONFLUENCE OF MINOR STREAMS ****
_____________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      7.330(Ac.)
Runoff from this stream =     27.137(CFS)
Time of concentration =   12.92 min.
Rainfall intensity =     4.396(In/Hr)
Area averaged loss rate (Fm) =    0.2822(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     36.98     9.370     12.12    0.211      4.596
2     27.14     7.330     12.92    0.282      4.396
Qmax(1) =
          1.000 *    1.000 *    36.984) +
          1.049 *    0.938 *    27.137) + =      63.687
Qmax(2) =
          0.954 *    1.000 *    36.984) +
          1.000 *    1.000 *    27.137) + =      62.428

Total of 2 streams to confluence:
Flow rates before confluence point:
      36.984      27.137
Maximum flow rates at confluence using above data:
       63.687       62.428
Area of streams before confluence:
        9.370        7.330
Effective area values after confluence:
       16.247       16.700
Results of confluence:
Total flow rate =     63.687(CFS)
Time of concentration =    12.117 min.
Effective stream area after confluence =     16.247(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.242(In/Hr)
Study area total (this main stream) =      16.70(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
```

```
Process from Point/Station      103.000 to Point/Station      103.100
**** SUBAREA FLOW ADDITION ****
____________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.290(In/Hr)
Time of concentration =    12.12 min.
Rainfall intensity =      4.596(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.852
Subarea runoff =      6.999(CFS) for    1.810(Ac.)
Total runoff =     70.685(CFS)
Effective area this stream =       18.06(Ac.)
Total Study Area (Main Stream No. 1) =       18.51(Ac.)
Area averaged Fm value =    0.247(In/Hr)
End of computations, Total Study Area =           18.51 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  70.0
```

Area 'B' – 10 Year 1 Hour - Existing Condition – Rational Method

```
              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/10/24
-----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'B'
10 YEAR STORM
NOVEMBER 4, 2024
-----------------------------------------------------------------------


Program License Serial Number 6407

-----------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
_______________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Initial subarea data:
Initial area flow distance =   679.000(Ft.)
Top (of initial area) elevation =  2405.000(Ft.)
Bottom (of initial area) elevation =  2302.000(Ft.)
Difference in elevation =   103.000(Ft.)
Slope =    0.15169  s(%)=      15.17
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.392 min.
Rainfall intensity =      3.412(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.794
Subarea runoff =      4.901(CFS)
Total initial stream area =        1.810(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.404(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_______________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.572(Ft.), Average velocity =  12.379(Ft/s)
       ******* Irregular Channel Data ***********
-----------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1              0.00              5.00
       2             10.00              0.00
       3             20.00              5.00
Manning's 'N' friction factor =   0.030
-----------------------------------------------------------------
Sub-Channel flow  =      8.094(CFS)
```

```
  '     '       flow top width =      2.287(Ft.)
  '     '    velocity=   12.379(Ft/s)
  '     '       area =      0.654(Sq.Ft)
  '     '       Froude number =     4.080

Upstream point elevation =  2302.000(Ft.)
Downstream point elevation =  2135.000(Ft.)
Flow length =   434.000(Ft.)
Travel time  =    0.58 min.
Time of concentration =   10.98 min.
Depth of flow =   0.572(Ft.)
Average velocity =  12.379(Ft/s)
Total irregular channel flow =     8.094(CFS)
Irregular channel normal depth above invert elev. =   0.572(Ft.)
Average velocity of channel(s) =  12.379(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Rainfall intensity =      3.284(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.789
Subarea runoff =      6.324(CFS) for    2.520(Ac.)
Total runoff =     11.224(CFS)
Effective area this stream =        4.33(Ac.)
Total Study Area (Main Stream No. 1) =        4.33(Ac.)
Area averaged Fm value =    0.404(In/Hr)
Depth of flow =   0.646(Ft.), Average velocity =  13.433(Ft/s)
End of computations, Total Study Area =            4.33 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

Area 'B' – 100 Year 1 Hour - Existing Condition – Rational Method

```
                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/10/24
------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'B'
100 YEAR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Initial subarea data:
Initial area flow distance =   679.000(Ft.)
Top (of initial area) elevation =  2405.000(Ft.)
Bottom (of initial area) elevation =  2302.000(Ft.)
Difference in elevation =   103.000(Ft.)
Slope =    0.15169  s(%)=      15.17
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.392 min.
Rainfall intensity =      5.118(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.875
Subarea runoff =      8.109(CFS)
Total initial stream area =        1.810(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.140(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.692(Ft.), Average velocity =  14.058(Ft/s)
       ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1             0.00             5.00
       2            10.00             0.00
       3            20.00             5.00
Manning's 'N' friction factor =   0.030
------------------------------------------------------------------
```

```
Sub-Channel flow  =     13.464(CFS)
  '     '       flow top width =      2.768(Ft.)
  '     '    velocity=   14.058(Ft/s)
  '     '       area =      0.958(Sq.Ft)
  '     '       Froude number =     4.212

Upstream point elevation =  2302.000(Ft.)
Downstream point elevation =  2135.000(Ft.)
Flow length =   434.000(Ft.)
Travel time  =    0.51 min.
Time of concentration =   10.91 min.
Depth of flow =   0.692(Ft.)
Average velocity =  14.058(Ft/s)
Total irregular channel flow =    13.464(CFS)
Irregular channel normal depth above invert elev. =   0.692(Ft.)
Average velocity of channel(s) =  14.058(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Rainfall intensity =      4.948(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.875
Subarea runoff =     10.627(CFS) for    2.520(Ac.)
Total runoff =     18.736(CFS)
Effective area this stream =        4.33(Ac.)
Total Study Area (Main Stream No. 1) =        4.33(Ac.)
Area averaged Fm value =    0.140(In/Hr)
Depth of flow =   0.783(Ft.), Average velocity =  15.269(Ft/s)
End of computations, Total Study Area =            4.33 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

Area 'C' – 10 Year 1 Hour - Existing Condition – Rational Method

```
              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
--------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'C'
10 YEAR STORM
DECEMBER 17, 2024
--------------------------------------------------------------------------


Program License Serial Number 6407

--------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

--------------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


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Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
__________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.578(In/Hr)
Initial subarea data:
Initial area flow distance =   964.000(Ft.)
Top (of initial area) elevation =  2040.000(Ft.)
Bottom (of initial area) elevation =  1960.000(Ft.)
Difference in elevation =    80.000(Ft.)
Slope =    0.08299  s(%)=       8.30
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.489 min.
Rainfall intensity =      2.843(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.717
Subarea runoff =     13.307(CFS)
Total initial stream area =        6.530(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.578(In/Hr)
End of computations, Total Study Area =            6.53 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  67.0
```

Area ‘C’ – 100 Year 1 Hour - Existing Condition – Rational Method

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                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'C'
100 YEAR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


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Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.290(In/Hr)
Initial subarea data:
Initial area flow distance =   964.000(Ft.)
Top (of initial area) elevation =  2040.000(Ft.)
Bottom (of initial area) elevation =  1960.000(Ft.)
Difference in elevation =    80.000(Ft.)
Slope =    0.08299  s(%)=       8.30
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.489 min.
Rainfall intensity =      4.264(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.839
Subarea runoff =     23.355(CFS)
Total initial stream area =        6.530(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.290(In/Hr)
End of computations, Total Study Area =            6.53 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  67.0
```

Area 'D' – 10 Year 1 Hour - Existing Condition – Rational Method

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                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/10/24
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TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'D'
10 YEAR STORM
NOVEMBER 4, 2024
-----------------------------------------------------------------------


Program License Serial Number 6407

-----------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      400.000 to Point/Station      401.000
**** INITIAL AREA EVALUATION ****
_______________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.400
Decimal fraction soil group B = 0.600
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 73.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.476(In/Hr)
Initial subarea data:
Initial area flow distance =   800.000(Ft.)
Top (of initial area) elevation =  2090.000(Ft.)
Bottom (of initial area) elevation =  2050.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.05000  s(%)=       5.00
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.855 min.
Rainfall intensity =      2.790(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.747
Subarea runoff =      5.207(CFS)
Total initial stream area =        2.500(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.476(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      401.000 to Point/Station      402.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_______________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.632(Ft.), Average velocity =   6.919(Ft/s)
       ******* Irregular Channel Data ***********
-----------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1              0.00              5.00
       2             20.00              0.00
       3             40.00              5.00
Manning's 'N' friction factor =   0.030
-----------------------------------------------------------------
Sub-Channel flow  =     11.062(CFS)
```

```
  '     '       flow top width =      5.058(Ft.)
  '     '    velocity=    6.919(Ft/s)
  '     '       area =      1.599(Sq.Ft)
  '     '       Froude number =     2.169

Upstream point elevation =  2050.000(Ft.)
Downstream point elevation =  1965.000(Ft.)
Flow length =   901.000(Ft.)
Travel time  =    2.17 min.
Time of concentration =   16.03 min.
Depth of flow =   0.632(Ft.)
Average velocity =   6.919(Ft/s)
Total irregular channel flow =    11.062(CFS)
Irregular channel normal depth above invert elev. =   0.632(Ft.)
Average velocity of channel(s) =   6.919(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.578(In/Hr)
Rainfall intensity =      2.520(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.703
Subarea runoff =     11.657(CFS) for    7.020(Ac.)
Total runoff =     16.864(CFS)
Effective area this stream =        9.52(Ac.)
Total Study Area (Main Stream No. 1) =        9.52(Ac.)
Area averaged Fm value =    0.551(In/Hr)
Depth of flow =   0.741(Ft.), Average velocity =   7.688(Ft/s)
End of computations, Total Study Area =            9.52 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  68.7
```

Area 'D' – 100 Year 1 Hour - Existing Condition – Rational Method

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              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/10/24
-----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'D'
100 YEAR STORM
NOVEMBER 4, 2024
-----------------------------------------------------------------------


Program License Serial Number 6407

-----------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      400.000 to Point/Station      401.000
**** INITIAL AREA EVALUATION ****
_______________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.400
Decimal fraction soil group B = 0.600
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 73.60
Adjusted SCS curve number for AMC 3 = 89.88
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.195(In/Hr)
Initial subarea data:
Initial area flow distance =   800.000(Ft.)
Top (of initial area) elevation =  2090.000(Ft.)
Bottom (of initial area) elevation =  2050.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.05000  s(%)=       5.00
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.855 min.
Rainfall intensity =      4.185(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.858
Subarea runoff =      8.978(CFS)
Total initial stream area =        2.500(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.195(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      401.000 to Point/Station      402.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_______________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.786(Ft.), Average velocity =   8.001(Ft/s)
       ******* Irregular Channel Data ***********
-----------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1             0.00              5.00
       2            20.00              0.00
       3            40.00              5.00
Manning's 'N' friction factor =   0.030
-----------------------------------------------------------------
```

```
Sub-Channel flow  =     19.787(CFS)
  '     '       flow top width =      6.290(Ft.)
  '     '    velocity=    8.001(Ft/s)
  '     '       area =      2.473(Sq.Ft)
  '     '       Froude number =     2.249

Upstream point elevation =  2050.000(Ft.)
Downstream point elevation =  1965.000(Ft.)
Flow length =   901.000(Ft.)
Travel time  =    1.88 min.
Time of concentration =   15.73 min.
Depth of flow =   0.786(Ft.)
Average velocity =   8.001(Ft/s)
Total irregular channel flow =    19.787(CFS)
Irregular channel normal depth above invert elev. =   0.786(Ft.)
Average velocity of channel(s) =   8.001(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.290(In/Hr)
Rainfall intensity =      3.829(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.838
Subarea runoff =     21.557(CFS) for    7.020(Ac.)
Total runoff =     30.535(CFS)
Effective area this stream =        9.52(Ac.)
Total Study Area (Main Stream No. 1) =        9.52(Ac.)
Area averaged Fm value =    0.265(In/Hr)
Depth of flow =   0.925(Ft.), Average velocity =   8.918(Ft/s)
End of computations, Total Study Area =            9.52 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  68.7
```

Area 'E' – 10 Year 1 Hour - Existing Condition – Rational Method

```
                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'E'
10 YEAR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      500.000 to Point/Station      501.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Initial subarea data:
Initial area flow distance =   907.000(Ft.)
Top (of initial area) elevation =  2270.000(Ft.)
Bottom (of initial area) elevation =  2200.000(Ft.)
Difference in elevation =    70.000(Ft.)
Slope =    0.07718  s(%)=       7.72
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.357 min.
Rainfall intensity =      2.862(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.773
Subarea runoff =      5.687(CFS)
Total initial stream area =        2.570(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.404(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      502.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.764(Ft.), Average velocity =   7.769(Ft/s)
       ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1              0.00              5.00
       2             20.00              0.00
       3             40.00              5.00
Manning's 'N' friction factor =   0.030
------------------------------------------------------------------
Sub-Channel flow  =     18.136(CFS)
```

```
  '     '       flow top width =      6.112(Ft.)
  '     '    velocity=    7.769(Ft/s)
  '     '       area =      2.334(Sq.Ft)
  '     '       Froude number =     2.215

Upstream point elevation =  2200.000(Ft.)
Downstream point elevation =  2100.000(Ft.)
Flow length =  1082.000(Ft.)
Travel time  =    2.32 min.
Time of concentration =   15.68 min.
Depth of flow =   0.764(Ft.)
Average velocity =   7.769(Ft/s)
Total irregular channel flow =    18.136(CFS)
Irregular channel normal depth above invert elev. =   0.764(Ft.)
Average velocity of channel(s) =   7.769(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Rainfall intensity =      2.559(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.758
Subarea runoff =     24.822(CFS) for   13.160(Ac.)
Total runoff =     30.509(CFS)
Effective area this stream =       15.73(Ac.)
Total Study Area (Main Stream No. 1) =       15.73(Ac.)
Area averaged Fm value =    0.404(In/Hr)
Depth of flow =   0.928(Ft.), Average velocity =   8.848(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      502.000 to Point/Station      503.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.161(Ft.), Average velocity =   8.234(Ft/s)
       ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1             0.00              5.00
       2            20.00              0.00
       3            40.00              5.00
Manning's 'N' friction factor =   0.030
------------------------------------------------------------------
Sub-Channel flow  =     44.383(CFS)
  '     '       flow top width =      9.287(Ft.)
  '     '    velocity=    8.234(Ft/s)
  '     '       area =      5.390(Sq.Ft)
  '     '       Froude number =     1.905

Upstream point elevation =  2100.000(Ft.)
Downstream point elevation =  1996.000(Ft.)
Flow length =  1750.000(Ft.)
Travel time  =    3.54 min.
Time of concentration =   19.22 min.
Depth of flow =   1.161(Ft.)
Average velocity =   8.234(Ft/s)
Total irregular channel flow =    44.383(CFS)
Irregular channel normal depth above invert elev. =   1.161(Ft.)
Average velocity of channel(s) =   8.234(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
```

```
SCS curve number for soil(AMC 2)  = 72.50
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.493(In/Hr)
Rainfall intensity =      2.219(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.716
Subarea runoff =     27.687(CFS) for   20.930(Ac.)
Total runoff =     58.197(CFS)
Effective area this stream =       36.66(Ac.)
Total Study Area (Main Stream No. 1) =       36.66(Ac.)
Area averaged Fm value =    0.455(In/Hr)
Depth of flow =   1.285(Ft.), Average velocity =   8.811(Ft/s)
End of computations, Total Study Area =           36.66 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  74.9
```

Area ‘E’ – 100 Year 1 Hour - Existing Condition – Rational Method

```
                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'E'
100 YEAR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      500.000 to Point/Station      501.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Initial subarea data:
Initial area flow distance =   907.000(Ft.)
Top (of initial area) elevation =  2270.000(Ft.)
Bottom (of initial area) elevation =  2200.000(Ft.)
Difference in elevation =    70.000(Ft.)
Slope =    0.07718  s(%)=       7.72
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.357 min.
Rainfall intensity =      4.293(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.871
Subarea runoff =      9.607(CFS)
Total initial stream area =        2.570(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.140(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      502.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.938(Ft.), Average velocity =   8.911(Ft/s)
       ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1             0.00              5.00
       2            20.00              0.00
       3            40.00              5.00
Manning's 'N' friction factor =   0.030
------------------------------------------------------------------
```

```
Sub-Channel flow  =     31.395(CFS)
  '     '       flow top width =      7.508(Ft.)
  '     '    velocity=    8.911(Ft/s)
  '     '       area =      3.523(Sq.Ft)
  '     '       Froude number =     2.293

Upstream point elevation =  2200.000(Ft.)
Downstream point elevation =  2100.000(Ft.)
Flow length =  1082.000(Ft.)
Travel time  =    2.02 min.
Time of concentration =   15.38 min.
Depth of flow =   0.938(Ft.)
Average velocity =   8.911(Ft/s)
Total irregular channel flow =    31.395(CFS)
Irregular channel normal depth above invert elev. =   0.938(Ft.)
Average velocity of channel(s) =   8.911(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Rainfall intensity =      3.890(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.868
Subarea runoff =     43.478(CFS) for   13.160(Ac.)
Total runoff =     53.084(CFS)
Effective area this stream =       15.73(Ac.)
Total Study Area (Main Stream No. 1) =       15.73(Ac.)
Area averaged Fm value =    0.140(In/Hr)
Depth of flow =   1.143(Ft.), Average velocity =  10.162(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      502.000 to Point/Station      503.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.449(Ft.), Average velocity =   9.545(Ft/s)
       ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1              0.00              5.00
       2             20.00              0.00
       3             40.00              5.00
Manning's 'N' friction factor =   0.030
------------------------------------------------------------------
Sub-Channel flow  =     80.127(CFS)
  '     '       flow top width =     11.590(Ft.)
  '     '    velocity=    9.545(Ft/s)
  '     '       area =      8.395(Sq.Ft)
  '     '       Froude number =     1.976

Upstream point elevation =  2100.000(Ft.)
Downstream point elevation =  1996.000(Ft.)
Flow length =  1750.000(Ft.)
Travel time  =    3.06 min.
Time of concentration =   18.44 min.
Depth of flow =   1.449(Ft.)
Average velocity =   9.545(Ft/s)
Total irregular channel flow =    80.127(CFS)
Irregular channel normal depth above invert elev. =   1.449(Ft.)
Average velocity of channel(s) =   9.545(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
```

```
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 72.50
Adjusted SCS curve number for AMC 3 = 89.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.211(In/Hr)
Rainfall intensity =      3.426(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.853
Subarea runoff =     54.010(CFS) for   20.930(Ac.)
Total runoff =    107.095(CFS)
Effective area this stream =       36.66(Ac.)
Total Study Area (Main Stream No. 1) =       36.66(Ac.)
Area averaged Fm value =    0.180(In/Hr)
Depth of flow =   1.615(Ft.), Average velocity =  10.262(Ft/s)
End of computations, Total Study Area =           36.66 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  74.9
```

Area 'F' – 10 Year 1 Hour - Existing Condition – Rational Method

```
              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/11/24
-----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'F'
10 YEAR STORM
NOVEMBER 4, 2024
-----------------------------------------------------------------------


Program License Serial Number 6407

-----------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      600.000 to Point/Station      601.000
**** INITIAL AREA EVALUATION ****
_______________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Initial subarea data:
Initial area flow distance =   761.000(Ft.)
Top (of initial area) elevation =  2302.000(Ft.)
Bottom (of initial area) elevation =  2100.000(Ft.)
Difference in elevation =   202.000(Ft.)
Slope =    0.26544  s(%)=      26.54
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.726 min.
Rainfall intensity =      3.574(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.798
Subarea runoff =     19.147(CFS)
Total initial stream area =        6.710(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.404(In/Hr)
End of computations, Total Study Area =            6.71 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

Area 'F' – 100 Year 1 Hour - Existing Condition – Rational Method

```
              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/11/24
--------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'F'
100 YEAR STORM
NOVEMBER 4, 2024
--------------------------------------------------------------------------


Program License Serial Number 6407

--------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

--------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      600.000 to Point/Station      601.000
**** INITIAL AREA EVALUATION ****
__________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Initial subarea data:
Initial area flow distance =   761.000(Ft.)
Top (of initial area) elevation =  2302.000(Ft.)
Bottom (of initial area) elevation =  2100.000(Ft.)
Difference in elevation =   202.000(Ft.)
Slope =    0.26544  s(%)=      26.54
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.726 min.
Rainfall intensity =      5.361(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.876
Subarea runoff =     31.530(CFS)
Total initial stream area =        6.710(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.140(In/Hr)
End of computations, Total Study Area =            6.71 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

Area ‘G’ – 10 Year 1 Hour - Existing Condition – Rational Method

```
                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/14/24
-----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'G'
10 YEAR STORM
NOVEMBER 4, 2024
-----------------------------------------------------------------------


Program License Serial Number 6407

-----------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      700.000 to Point/Station      701.000
**** INITIAL AREA EVALUATION ****
_______________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.578(In/Hr)
Initial subarea data:
Initial area flow distance =   768.000(Ft.)
Top (of initial area) elevation =  2155.000(Ft.)
Bottom (of initial area) elevation =  2070.000(Ft.)
Difference in elevation =    85.000(Ft.)
Slope =    0.11068  s(%)=      11.07
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.628 min.
Rainfall intensity =      3.154(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.735
Subarea runoff =     14.697(CFS)
Total initial stream area =        6.340(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.578(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      702.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_______________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.683(Ft.), Average velocity =   6.958(Ft/s)
       ******* Irregular Channel Data ***********
-----------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1              0.00              2.00
       2             20.00              0.00
       3             40.00              2.00
Manning's 'N' friction factor =   0.030
-----------------------------------------------------------------
Sub-Channel flow  =     32.430(CFS)
```

```
  '     '       flow top width =     13.654(Ft.)
  '     '    velocity=    6.958(Ft/s)
  '     '       area =      4.661(Sq.Ft)
  '     '       Froude number =     2.099

Upstream point elevation =  2070.000(Ft.)
Downstream point elevation =  1987.000(Ft.)
Flow length =   997.000(Ft.)
Travel time  =    2.39 min.
Time of concentration =   14.02 min.
Depth of flow =   0.683(Ft.)
Average velocity =   6.958(Ft/s)
Total irregular channel flow =    32.430(CFS)
Irregular channel normal depth above invert elev. =   0.683(Ft.)
Average velocity of channel(s) =   6.958(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.578(In/Hr)
Rainfall intensity =      2.767(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.712
Subarea runoff =     35.385(CFS) for   19.080(Ac.)
Total runoff =     50.081(CFS)
Effective area this stream =       25.42(Ac.)
Total Study Area (Main Stream No. 1) =       25.42(Ac.)
Area averaged Fm value =    0.578(In/Hr)
Depth of flow =   0.804(Ft.), Average velocity =   7.756(Ft/s)
End of computations, Total Study Area =           25.42 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  67.0
```

Area ‘G’ – 100 Year 1 Hour - Existing Condition – Rational Method

```
              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 11/14/24
------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY RATIONAL
DRAINAGE AREA 'G'
100 YEAR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      700.000 to Point/Station      701.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.290(In/Hr)
Initial subarea data:
Initial area flow distance =   768.000(Ft.)
Top (of initial area) elevation =  2155.000(Ft.)
Bottom (of initial area) elevation =  2070.000(Ft.)
Difference in elevation =    85.000(Ft.)
Slope =    0.11068  s(%)=      11.07
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.628 min.
Rainfall intensity =      4.731(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.845
Subarea runoff =     25.340(CFS)
Total initial stream area =        6.340(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.290(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      702.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.847(Ft.), Average velocity =   8.033(Ft/s)
       ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1             0.00              2.00
       2            20.00              0.00
       3            40.00              2.00
Manning's 'N' friction factor =   0.030
------------------------------------------------------------------
```

```
Sub-Channel flow  =     57.637(CFS)
  '     '       flow top width =     16.941(Ft.)
  '     '    velocity=    8.033(Ft/s)
  '     '       area =      7.175(Sq.Ft)
  '     '       Froude number =     2.175

Upstream point elevation =  2070.000(Ft.)
Downstream point elevation =  1987.000(Ft.)
Flow length =   997.000(Ft.)
Travel time  =    2.07 min.
Time of concentration =   13.70 min.
Depth of flow =   0.847(Ft.)
Average velocity =   8.033(Ft/s)
Total irregular channel flow =    57.637(CFS)
Irregular channel normal depth above invert elev. =   0.847(Ft.)
Average velocity of channel(s) =   8.033(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.290(In/Hr)
Rainfall intensity =      4.219(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.838
Subarea runoff =     64.541(CFS) for   19.080(Ac.)
Total runoff =     89.881(CFS)
Effective area this stream =       25.42(Ac.)
Total Study Area (Main Stream No. 1) =       25.42(Ac.)
Area averaged Fm value =    0.290(In/Hr)
Depth of flow =   1.001(Ft.), Average velocity =   8.977(Ft/s)
End of computations, Total Study Area =           25.42 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  67.0
```

Attachment 2

Existing Conditions
Unit Hydrograph Calculations

Area 'A' – 2 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/14/24

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
----------------------------------------------------------------------

San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
2 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 2

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            18.06            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            18.06            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            18.06           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            18.06            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            18.06            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            18.06           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 70.0      51.0         18.06      1.000     0.797    1.000    0.797

Area-averaged adjusted loss rate Fm (In/Hr) =  0.797

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
18.06	1.000	70.0	51.0	9.61	0.092

Area-averaged catchment yield fraction, Y = 0.092
Area-averaged low loss fraction, Yb = 0.908
User entry of time of concentration = 0.202 (hours)

++

Watershed area = 18.06(Ac.)
Catchment Lag time = 0.162 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 51.5677
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.797(In/Hr)
Average low loss rate fraction (Yb) = 0.908 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 18.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.308(In)
30-minute factor = 0.999 Adjusted rainfall = 0.528(In)
1-hour factor = 0.999 Adjusted rainfall = 0.650(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

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

++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 218.41 (CFS))	
1	4.472	9.767
2	26.592	48.314
3	64.398	82.572
4	78.587	30.990
5	86.751	17.831
6	92.030	11.532
7	95.442	7.452
8	97.482	4.455
9	98.356	1.909
10	98.889	1.165
11	99.255	0.797
12	99.630	0.821
13	99.870	0.524
14	100.000	0.283

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3084	0.3084
2	0.3797	0.0713
3	0.4288	0.0491
4	0.4675	0.0387
5	0.4998	0.0324
6	0.5279	0.0281
7	0.5529	0.0250
8	0.5755	0.0226
9	0.5962	0.0207
10	0.6154	0.0191
11	0.6332	0.0178
12	0.6500	0.0167

13	0.6834	0.0335
14	0.7160	0.0325
15	0.7477	0.0317
16	0.7786	0.0309
17	0.8087	0.0302
18	0.8383	0.0295
19	0.8672	0.0289
20	0.8956	0.0284
21	0.9234	0.0278
22	0.9508	0.0274
23	0.9777	0.0269
24	1.0041	0.0265
25	1.0302	0.0261
26	1.0558	0.0257
27	1.0812	0.0253
28	1.1061	0.0250
29	1.1307	0.0246
30	1.1550	0.0243
31	1.1791	0.0240
32	1.2028	0.0237
33	1.2262	0.0235
34	1.2494	0.0232
35	1.2724	0.0229
36	1.2951	0.0227
37	1.3175	0.0224
38	1.3397	0.0222
39	1.3617	0.0220
40	1.3835	0.0218
41	1.4051	0.0216
42	1.4265	0.0214
43	1.4476	0.0212
44	1.4687	0.0210
45	1.4895	0.0208
46	1.5102	0.0207
47	1.5307	0.0205
48	1.5510	0.0203
49	1.5712	0.0202
50	1.5912	0.0200
51	1.6111	0.0199
52	1.6308	0.0197
53	1.6504	0.0196
54	1.6699	0.0195
55	1.6892	0.0193
56	1.7084	0.0192
57	1.7274	0.0191
58	1.7464	0.0189
59	1.7652	0.0188
60	1.7839	0.0187
61	1.8025	0.0186
62	1.8209	0.0185
63	1.8393	0.0184
64	1.8575	0.0182
65	1.8757	0.0181
66	1.8937	0.0180
67	1.9117	0.0179
68	1.9295	0.0178
69	1.9472	0.0177
70	1.9649	0.0176
71	1.9824	0.0176
72	1.9999	0.0175
73	2.0137	0.0138
74	2.0275	0.0137
75	2.0411	0.0137
76	2.0547	0.0136
77	2.0682	0.0135
78	2.0816	0.0134
79	2.0949	0.0133
80	2.1081	0.0132
81	2.1212	0.0131
82	2.1343	0.0131
83	2.1472	0.0130

84	2.1601	0.0129
85	2.1730	0.0128
86	2.1857	0.0127
87	2.1984	0.0127
88	2.2110	0.0126
89	2.2235	0.0125
90	2.2360	0.0125
91	2.2483	0.0124
92	2.2607	0.0123
93	2.2729	0.0123
94	2.2851	0.0122
95	2.2972	0.0121
96	2.3093	0.0121
97	2.3213	0.0120
98	2.3332	0.0119
99	2.3451	0.0119
100	2.3569	0.0118
101	2.3687	0.0118
102	2.3804	0.0117
103	2.3920	0.0116
104	2.4036	0.0116
105	2.4151	0.0115
106	2.4266	0.0115
107	2.4380	0.0114
108	2.4494	0.0114
109	2.4607	0.0113
110	2.4720	0.0113
111	2.4832	0.0112
112	2.4943	0.0112
113	2.5054	0.0111
114	2.5165	0.0111
115	2.5275	0.0110
116	2.5385	0.0110
117	2.5494	0.0109
118	2.5603	0.0109
119	2.5711	0.0108
120	2.5819	0.0108
121	2.5926	0.0107
122	2.6033	0.0107
123	2.6140	0.0106
124	2.6246	0.0106
125	2.6351	0.0106
126	2.6456	0.0105
127	2.6561	0.0105
128	2.6666	0.0104
129	2.6770	0.0104
130	2.6873	0.0104
131	2.6976	0.0103
132	2.7079	0.0103
133	2.7181	0.0102
134	2.7283	0.0102
135	2.7385	0.0102
136	2.7486	0.0101
137	2.7587	0.0101
138	2.7688	0.0101
139	2.7788	0.0100
140	2.7888	0.0100
141	2.7987	0.0099
142	2.8086	0.0099
143	2.8185	0.0099
144	2.8283	0.0098
145	2.8381	0.0098
146	2.8479	0.0098
147	2.8576	0.0097
148	2.8673	0.0097
149	2.8770	0.0097
150	2.8866	0.0096
151	2.8962	0.0096
152	2.9058	0.0096
153	2.9154	0.0095
154	2.9249	0.0095

155	2.9344	0.0095
156	2.9438	0.0095
157	2.9532	0.0094
158	2.9626	0.0094
159	2.9720	0.0094
160	2.9813	0.0093
161	2.9906	0.0093
162	2.9999	0.0093
163	3.0091	0.0092
164	3.0184	0.0092
165	3.0275	0.0092
166	3.0367	0.0092
167	3.0458	0.0091
168	3.0549	0.0091
169	3.0640	0.0091
170	3.0731	0.0091
171	3.0821	0.0090
172	3.0911	0.0090
173	3.1001	0.0090
174	3.1090	0.0089
175	3.1179	0.0089
176	3.1268	0.0089
177	3.1357	0.0089
178	3.1446	0.0088
179	3.1534	0.0088
180	3.1622	0.0088
181	3.1709	0.0088
182	3.1797	0.0087
183	3.1884	0.0087
184	3.1971	0.0087
185	3.2058	0.0087
186	3.2144	0.0087
187	3.2231	0.0086
188	3.2317	0.0086
189	3.2403	0.0086
190	3.2488	0.0086
191	3.2574	0.0085
192	3.2659	0.0085
193	3.2744	0.0085
194	3.2828	0.0085
195	3.2913	0.0085
196	3.2997	0.0084
197	3.3081	0.0084
198	3.3165	0.0084
199	3.3249	0.0084
200	3.3332	0.0083
201	3.3416	0.0083
202	3.3499	0.0083
203	3.3581	0.0083
204	3.3664	0.0083
205	3.3746	0.0082
206	3.3829	0.0082
207	3.3911	0.0082
208	3.3992	0.0082
209	3.4074	0.0082
210	3.4155	0.0081
211	3.4237	0.0081
212	3.4318	0.0081
213	3.4399	0.0081
214	3.4479	0.0081
215	3.4560	0.0080
216	3.4640	0.0080
217	3.4720	0.0080
218	3.4800	0.0080
219	3.4880	0.0080
220	3.4959	0.0080
221	3.5039	0.0079
222	3.5118	0.0079
223	3.5197	0.0079
224	3.5276	0.0079
225	3.5354	0.0079

226	3.5433	0.0078
227	3.5511	0.0078
228	3.5589	0.0078
229	3.5667	0.0078
230	3.5745	0.0078
231	3.5823	0.0078
232	3.5900	0.0077
233	3.5977	0.0077
234	3.6055	0.0077
235	3.6131	0.0077
236	3.6208	0.0077
237	3.6285	0.0077
238	3.6361	0.0076
239	3.6438	0.0076
240	3.6514	0.0076
241	3.6590	0.0076
242	3.6666	0.0076
243	3.6741	0.0076
244	3.6817	0.0076
245	3.6892	0.0075
246	3.6967	0.0075
247	3.7043	0.0075
248	3.7117	0.0075
249	3.7192	0.0075
250	3.7267	0.0075
251	3.7341	0.0074
252	3.7416	0.0074
253	3.7490	0.0074
254	3.7564	0.0074
255	3.7638	0.0074
256	3.7711	0.0074
257	3.7785	0.0074
258	3.7858	0.0073
259	3.7932	0.0073
260	3.8005	0.0073
261	3.8078	0.0073
262	3.8151	0.0073
263	3.8224	0.0073
264	3.8296	0.0073
265	3.8369	0.0072
266	3.8441	0.0072
267	3.8513	0.0072
268	3.8585	0.0072
269	3.8657	0.0072
270	3.8729	0.0072
271	3.8801	0.0072
272	3.8872	0.0072
273	3.8943	0.0071
274	3.9015	0.0071
275	3.9086	0.0071
276	3.9157	0.0071
277	3.9228	0.0071
278	3.9298	0.0071
279	3.9369	0.0071
280	3.9440	0.0070
281	3.9510	0.0070
282	3.9580	0.0070
283	3.9650	0.0070
284	3.9720	0.0070
285	3.9790	0.0070
286	3.9860	0.0070
287	3.9930	0.0070
288	3.9999	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0063	0.0006
2	0.0070	0.0063	0.0006
3	0.0070	0.0063	0.0006

4	0.0070	0.0064	0.0006
5	0.0070	0.0064	0.0006
6	0.0070	0.0064	0.0007
7	0.0071	0.0064	0.0007
8	0.0071	0.0064	0.0007
9	0.0071	0.0064	0.0007
10	0.0071	0.0065	0.0007
11	0.0071	0.0065	0.0007
12	0.0072	0.0065	0.0007
13	0.0072	0.0065	0.0007
14	0.0072	0.0065	0.0007
15	0.0072	0.0066	0.0007
16	0.0072	0.0066	0.0007
17	0.0073	0.0066	0.0007
18	0.0073	0.0066	0.0007
19	0.0073	0.0066	0.0007
20	0.0073	0.0066	0.0007
21	0.0073	0.0067	0.0007
22	0.0074	0.0067	0.0007
23	0.0074	0.0067	0.0007
24	0.0074	0.0067	0.0007
25	0.0074	0.0067	0.0007
26	0.0074	0.0068	0.0007
27	0.0075	0.0068	0.0007
28	0.0075	0.0068	0.0007
29	0.0075	0.0068	0.0007
30	0.0075	0.0068	0.0007
31	0.0076	0.0069	0.0007
32	0.0076	0.0069	0.0007
33	0.0076	0.0069	0.0007
34	0.0076	0.0069	0.0007
35	0.0077	0.0070	0.0007
36	0.0077	0.0070	0.0007
37	0.0077	0.0070	0.0007
38	0.0077	0.0070	0.0007
39	0.0078	0.0070	0.0007
40	0.0078	0.0071	0.0007
41	0.0078	0.0071	0.0007
42	0.0078	0.0071	0.0007
43	0.0079	0.0071	0.0007
44	0.0079	0.0072	0.0007
45	0.0079	0.0072	0.0007
46	0.0079	0.0072	0.0007
47	0.0080	0.0072	0.0007
48	0.0080	0.0073	0.0007
49	0.0080	0.0073	0.0007
50	0.0080	0.0073	0.0007
51	0.0081	0.0073	0.0007
52	0.0081	0.0074	0.0007
53	0.0081	0.0074	0.0008
54	0.0082	0.0074	0.0008
55	0.0082	0.0074	0.0008
56	0.0082	0.0075	0.0008
57	0.0083	0.0075	0.0008
58	0.0083	0.0075	0.0008
59	0.0083	0.0076	0.0008
60	0.0083	0.0076	0.0008
61	0.0084	0.0076	0.0008
62	0.0084	0.0076	0.0008
63	0.0085	0.0077	0.0008
64	0.0085	0.0077	0.0008
65	0.0085	0.0077	0.0008
66	0.0085	0.0077	0.0008
67	0.0086	0.0078	0.0008
68	0.0086	0.0078	0.0008
69	0.0087	0.0079	0.0008
70	0.0087	0.0079	0.0008
71	0.0087	0.0079	0.0008
72	0.0087	0.0079	0.0008
73	0.0088	0.0080	0.0008
74	0.0088	0.0080	0.0008

75	0.0089	0.0081	0.0008
76	0.0089	0.0081	0.0008
77	0.0089	0.0081	0.0008
78	0.0090	0.0081	0.0008
79	0.0090	0.0082	0.0008
80	0.0091	0.0082	0.0008
81	0.0091	0.0083	0.0008
82	0.0091	0.0083	0.0008
83	0.0092	0.0083	0.0008
84	0.0092	0.0084	0.0009
85	0.0093	0.0084	0.0009
86	0.0093	0.0084	0.0009
87	0.0094	0.0085	0.0009
88	0.0094	0.0085	0.0009
89	0.0095	0.0086	0.0009
90	0.0095	0.0086	0.0009
91	0.0095	0.0087	0.0009
92	0.0096	0.0087	0.0009
93	0.0096	0.0087	0.0009
94	0.0097	0.0088	0.0009
95	0.0097	0.0088	0.0009
96	0.0098	0.0089	0.0009
97	0.0098	0.0089	0.0009
98	0.0099	0.0090	0.0009
99	0.0099	0.0090	0.0009
100	0.0100	0.0091	0.0009
101	0.0101	0.0091	0.0009
102	0.0101	0.0092	0.0009
103	0.0102	0.0092	0.0009
104	0.0102	0.0093	0.0009
105	0.0103	0.0093	0.0009
106	0.0103	0.0094	0.0010
107	0.0104	0.0094	0.0010
108	0.0104	0.0095	0.0010
109	0.0105	0.0095	0.0010
110	0.0106	0.0096	0.0010
111	0.0106	0.0097	0.0010
112	0.0107	0.0097	0.0010
113	0.0108	0.0098	0.0010
114	0.0108	0.0098	0.0010
115	0.0109	0.0099	0.0010
116	0.0110	0.0100	0.0010
117	0.0111	0.0100	0.0010
118	0.0111	0.0101	0.0010
119	0.0112	0.0102	0.0010
120	0.0113	0.0102	0.0010
121	0.0114	0.0103	0.0011
122	0.0114	0.0104	0.0011
123	0.0115	0.0105	0.0011
124	0.0116	0.0105	0.0011
125	0.0117	0.0106	0.0011
126	0.0118	0.0107	0.0011
127	0.0119	0.0108	0.0011
128	0.0119	0.0108	0.0011
129	0.0121	0.0109	0.0011
130	0.0121	0.0110	0.0011
131	0.0123	0.0111	0.0011
132	0.0123	0.0112	0.0011
133	0.0125	0.0113	0.0012
134	0.0125	0.0114	0.0012
135	0.0127	0.0115	0.0012
136	0.0127	0.0116	0.0012
137	0.0129	0.0117	0.0012
138	0.0130	0.0118	0.0012
139	0.0131	0.0119	0.0012
140	0.0132	0.0120	0.0012
141	0.0134	0.0121	0.0012
142	0.0135	0.0122	0.0012
143	0.0137	0.0124	0.0013
144	0.0137	0.0125	0.0013
145	0.0175	0.0158	0.0016

146	0.0176	0.0159	0.0016
147	0.0177	0.0161	0.0016
148	0.0178	0.0162	0.0016
149	0.0180	0.0164	0.0017
150	0.0181	0.0165	0.0017
151	0.0184	0.0167	0.0017
152	0.0185	0.0168	0.0017
153	0.0187	0.0170	0.0017
154	0.0188	0.0171	0.0017
155	0.0191	0.0173	0.0018
156	0.0192	0.0174	0.0018
157	0.0195	0.0177	0.0018
158	0.0196	0.0178	0.0018
159	0.0199	0.0180	0.0018
160	0.0200	0.0182	0.0019
161	0.0203	0.0185	0.0019
162	0.0205	0.0186	0.0019
163	0.0208	0.0189	0.0019
164	0.0210	0.0191	0.0019
165	0.0214	0.0194	0.0020
166	0.0216	0.0196	0.0020
167	0.0220	0.0200	0.0020
168	0.0222	0.0202	0.0021
169	0.0227	0.0206	0.0021
170	0.0229	0.0208	0.0021
171	0.0235	0.0213	0.0022
172	0.0237	0.0215	0.0022
173	0.0243	0.0221	0.0022
174	0.0246	0.0224	0.0023
175	0.0253	0.0230	0.0023
176	0.0257	0.0233	0.0024
177	0.0265	0.0240	0.0024
178	0.0269	0.0244	0.0025
179	0.0278	0.0253	0.0026
180	0.0284	0.0257	0.0026
181	0.0295	0.0268	0.0027
182	0.0302	0.0274	0.0028
183	0.0317	0.0288	0.0029
184	0.0325	0.0295	0.0030
185	0.0167	0.0152	0.0015
186	0.0178	0.0162	0.0016
187	0.0207	0.0188	0.0019
188	0.0226	0.0205	0.0021
189	0.0281	0.0255	0.0026
190	0.0324	0.0294	0.0030
191	0.0491	0.0446	0.0045
192	0.0713	0.0647	0.0066
193	0.3084	0.0665	0.2420
194	0.0387	0.0351	0.0036
195	0.0250	0.0227	0.0023
196	0.0191	0.0174	0.0018
197	0.0335	0.0304	0.0031
198	0.0309	0.0280	0.0029
199	0.0289	0.0263	0.0027
200	0.0274	0.0248	0.0025
201	0.0261	0.0236	0.0024
202	0.0250	0.0227	0.0023
203	0.0240	0.0218	0.0022
204	0.0232	0.0210	0.0021
205	0.0224	0.0204	0.0021
206	0.0218	0.0198	0.0020
207	0.0212	0.0192	0.0020
208	0.0207	0.0188	0.0019
209	0.0202	0.0183	0.0019
210	0.0197	0.0179	0.0018
211	0.0193	0.0175	0.0018
212	0.0189	0.0172	0.0018
213	0.0186	0.0169	0.0017
214	0.0182	0.0166	0.0017
215	0.0179	0.0163	0.0017
216	0.0176	0.0160	0.0016

217	0.0138	0.0126	0.0013
218	0.0136	0.0123	0.0013
219	0.0133	0.0121	0.0012
220	0.0131	0.0118	0.0012
221	0.0128	0.0116	0.0012
222	0.0126	0.0114	0.0012
223	0.0124	0.0112	0.0011
224	0.0122	0.0111	0.0011
225	0.0120	0.0109	0.0011
226	0.0118	0.0107	0.0011
227	0.0116	0.0106	0.0011
228	0.0115	0.0104	0.0011
229	0.0113	0.0103	0.0010
230	0.0112	0.0101	0.0010
231	0.0110	0.0100	0.0010
232	0.0109	0.0099	0.0010
233	0.0107	0.0097	0.0010
234	0.0106	0.0096	0.0010
235	0.0105	0.0095	0.0010
236	0.0104	0.0094	0.0010
237	0.0102	0.0093	0.0009
238	0.0101	0.0092	0.0009
239	0.0100	0.0091	0.0009
240	0.0099	0.0090	0.0009
241	0.0098	0.0089	0.0009
242	0.0097	0.0088	0.0009
243	0.0096	0.0087	0.0009
244	0.0095	0.0086	0.0009
245	0.0094	0.0086	0.0009
246	0.0093	0.0085	0.0009
247	0.0092	0.0084	0.0009
248	0.0092	0.0083	0.0008
249	0.0091	0.0082	0.0008
250	0.0090	0.0082	0.0008
251	0.0089	0.0081	0.0008
252	0.0088	0.0080	0.0008
253	0.0088	0.0080	0.0008
254	0.0087	0.0079	0.0008
255	0.0086	0.0078	0.0008
256	0.0086	0.0078	0.0008
257	0.0085	0.0077	0.0008
258	0.0084	0.0076	0.0008
259	0.0084	0.0076	0.0008
260	0.0083	0.0075	0.0008
261	0.0082	0.0075	0.0008
262	0.0082	0.0074	0.0008
263	0.0081	0.0074	0.0008
264	0.0081	0.0073	0.0007
265	0.0080	0.0073	0.0007
266	0.0080	0.0072	0.0007
267	0.0079	0.0072	0.0007
268	0.0078	0.0071	0.0007
269	0.0078	0.0071	0.0007
270	0.0077	0.0070	0.0007
271	0.0077	0.0070	0.0007
272	0.0076	0.0069	0.0007
273	0.0076	0.0069	0.0007
274	0.0076	0.0069	0.0007
275	0.0075	0.0068	0.0007
276	0.0075	0.0068	0.0007
277	0.0074	0.0067	0.0007
278	0.0074	0.0067	0.0007
279	0.0073	0.0067	0.0007
280	0.0073	0.0066	0.0007
281	0.0072	0.0066	0.0007
282	0.0072	0.0065	0.0007
283	0.0072	0.0065	0.0007
284	0.0071	0.0065	0.0007
285	0.0071	0.0064	0.0007
286	0.0070	0.0064	0.0007
287	0.0070	0.0064	0.0006

```
      288             0.0070          0.0063             0.0006
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.42(In)
      Total effective rainfall =      0.58(In)
      Peak flow rate in flood hydrograph =     20.53(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0000      0.01  Q          |          |          |          |
  0+10       0.0003      0.04  Q          |          |          |          |
  0+15       0.0009      0.09  Q          |          |          |          |
  0+20       0.0017      0.11  Q          |          |          |          |
  0+25       0.0025      0.12  Q          |          |          |          |
  0+30       0.0034      0.13  Q          |          |          |          |
  0+35       0.0044      0.14  Q          |          |          |          |
  0+40       0.0053      0.14  Q          |          |          |          |
  0+45       0.0063      0.14  Q          |          |          |          |
  0+50       0.0072      0.14  Q          |          |          |          |
  0+55       0.0082      0.14  Q          |          |          |          |
  1+ 0       0.0092      0.14  Q          |          |          |          |
  1+ 5       0.0102      0.14  Q          |          |          |          |
  1+10       0.0112      0.14  Q          |          |          |          |
  1+15       0.0122      0.14  Q          |          |          |          |
  1+20       0.0132      0.15  Q          |          |          |          |
  1+25       0.0142      0.15  Q          |          |          |          |
  1+30       0.0152      0.15  Q          |          |          |          |
  1+35       0.0162      0.15  Q          |          |          |          |
  1+40       0.0172      0.15  Q          |          |          |          |
  1+45       0.0182      0.15  Q          |          |          |          |
  1+50       0.0192      0.15  Q          |          |          |          |
  1+55       0.0203      0.15  Q          |          |          |          |
  2+ 0       0.0213      0.15  Q          |          |          |          |
  2+ 5       0.0223      0.15  QV         |          |          |          |
  2+10       0.0233      0.15  QV         |          |          |          |
  2+15       0.0244      0.15  QV         |          |          |          |
  2+20       0.0254      0.15  QV         |          |          |          |
  2+25       0.0264      0.15  QV         |          |          |          |
  2+30       0.0275      0.15  QV         |          |          |          |
  2+35       0.0285      0.15  QV         |          |          |          |
  2+40       0.0296      0.15  QV         |          |          |          |
  2+45       0.0306      0.15  QV         |          |          |          |
  2+50       0.0317      0.15  QV         |          |          |          |
  2+55       0.0327      0.15  QV         |          |          |          |
  3+ 0       0.0338      0.15  QV         |          |          |          |
  3+ 5       0.0348      0.15  QV         |          |          |          |
  3+10       0.0359      0.15  QV         |          |          |          |
  3+15       0.0370      0.16  QV         |          |          |          |
  3+20       0.0380      0.16  QV         |          |          |          |
  3+25       0.0391      0.16  QV         |          |          |          |
  3+30       0.0402      0.16  QV         |          |          |          |
  3+35       0.0413      0.16  QV         |          |          |          |
  3+40       0.0424      0.16  QV         |          |          |          |
  3+45       0.0435      0.16  QV         |          |          |          |
  3+50       0.0446      0.16  Q V        |          |          |          |
  3+55       0.0457      0.16  Q V        |          |          |          |
  4+ 0       0.0468      0.16  Q V        |          |          |          |
  4+ 5       0.0479      0.16  Q V        |          |          |          |
  4+10       0.0490      0.16  Q V        |          |          |          |
  4+15       0.0501      0.16  Q V        |          |          |          |
  4+20       0.0512      0.16  Q V        |          |          |          |
  4+25       0.0523      0.16  Q V        |          |          |          |
  4+30       0.0535      0.16  Q V        |          |          |          |
  4+35       0.0546      0.16  Q V        |          |          |          |
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 4+40      0.0557      0.16  Q V       |         |         |         |
 4+45      0.0568      0.17  Q V       |         |         |         |
 4+50      0.0580      0.17  Q V       |         |         |         |
 4+55      0.0591      0.17  Q V       |         |         |         |
 5+ 0      0.0603      0.17  Q V       |         |         |         |
 5+ 5      0.0614      0.17  Q V       |         |         |         |
 5+10      0.0626      0.17  Q V       |         |         |         |
 5+15      0.0638      0.17  Q V       |         |         |         |
 5+20      0.0649      0.17  Q V       |         |         |         |
 5+25      0.0661      0.17  Q  V      |         |         |         |
 5+30      0.0673      0.17  Q  V      |         |         |         |
 5+35      0.0685      0.17  Q  V      |         |         |         |
 5+40      0.0696      0.17  Q  V      |         |         |         |
 5+45      0.0708      0.17  Q  V      |         |         |         |
 5+50      0.0720      0.17  Q  V      |         |         |         |
 5+55      0.0732      0.17  Q  V      |         |         |         |
 6+ 0      0.0744      0.17  Q  V      |         |         |         |
 6+ 5      0.0756      0.18  Q  V      |         |         |         |
 6+10      0.0769      0.18  Q  V      |         |         |         |
 6+15      0.0781      0.18  Q  V      |         |         |         |
 6+20      0.0793      0.18  Q  V      |         |         |         |
 6+25      0.0805      0.18  Q  V      |         |         |         |
 6+30      0.0818      0.18  Q  V      |         |         |         |
 6+35      0.0830      0.18  Q  V      |         |         |         |
 6+40      0.0842      0.18  Q  V      |         |         |         |
 6+45      0.0855      0.18  Q  V      |         |         |         |
 6+50      0.0868      0.18  Q  V      |         |         |         |
 6+55      0.0880      0.18  Q   V     |         |         |         |
 7+ 0      0.0893      0.18  Q   V     |         |         |         |
 7+ 5      0.0906      0.18  Q   V     |         |         |         |
 7+10      0.0918      0.19  Q   V     |         |         |         |
 7+15      0.0931      0.19  Q   V     |         |         |         |
 7+20      0.0944      0.19  Q   V     |         |         |         |
 7+25      0.0957      0.19  Q   V     |         |         |         |
 7+30      0.0970      0.19  Q   V     |         |         |         |
 7+35      0.0983      0.19  Q   V     |         |         |         |
 7+40      0.0996      0.19  Q   V     |         |         |         |
 7+45      0.1010      0.19  Q   V     |         |         |         |
 7+50      0.1023      0.19  Q   V     |         |         |         |
 7+55      0.1036      0.19  Q   V     |         |         |         |
 8+ 0      0.1050      0.19  Q   V     |         |         |         |
 8+ 5      0.1063      0.20  Q   V     |         |         |         |
 8+10      0.1077      0.20  Q   V     |         |         |         |
 8+15      0.1090      0.20  Q   V     |         |         |         |
 8+20      0.1104      0.20  Q    V    |         |         |         |
 8+25      0.1118      0.20  Q    V    |         |         |         |
 8+30      0.1132      0.20  Q    V    |         |         |         |
 8+35      0.1145      0.20  Q    V    |         |         |         |
 8+40      0.1159      0.20  Q    V    |         |         |         |
 8+45      0.1174      0.20  Q    V    |         |         |         |
 8+50      0.1188      0.21  Q    V    |         |         |         |
 8+55      0.1202      0.21  Q    V    |         |         |         |
 9+ 0      0.1216      0.21  Q    V    |         |         |         |
 9+ 5      0.1231      0.21  Q    V    |         |         |         |
 9+10      0.1245      0.21  Q    V    |         |         |         |
 9+15      0.1260      0.21  Q    V    |         |         |         |
 9+20      0.1274      0.21  Q    V    |         |         |         |
 9+25      0.1289      0.21  Q    V    |         |         |         |
 9+30      0.1304      0.22  Q    V    |         |         |         |
 9+35      0.1319      0.22  Q     V   |         |         |         |
 9+40      0.1334      0.22  Q     V   |         |         |         |
 9+45      0.1349      0.22  Q     V   |         |         |         |
 9+50      0.1364      0.22  Q     V   |         |         |         |
 9+55      0.1379      0.22  Q     V   |         |         |         |
10+ 0      0.1395      0.22  Q     V   |         |         |         |
10+ 5      0.1410      0.23  Q     V   |         |         |         |
10+10      0.1426      0.23  Q     V   |         |         |         |
10+15      0.1442      0.23  Q     V   |         |         |         |
10+20      0.1458      0.23  Q     V   |         |         |         |
10+25      0.1473      0.23  Q     V   |         |         |         |
10+30      0.1490      0.23  Q     V   |         |         |         |
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10+35       0.1506      0.23  Q     V   |          |          |          |
10+40       0.1522      0.24  Q     V   |          |          |          |
10+45       0.1538      0.24  Q      V  |          |          |          |
10+50       0.1555      0.24  Q      V  |          |          |          |
10+55       0.1572      0.24  Q      V  |          |          |          |
11+ 0       0.1588      0.24  Q      V  |          |          |          |
11+ 5       0.1605      0.25  Q      V  |          |          |          |
11+10       0.1622      0.25  Q      V  |          |          |          |
11+15       0.1640      0.25  Q      V  |          |          |          |
11+20       0.1657      0.25  Q      V  |          |          |          |
11+25       0.1675      0.25  Q      V  |          |          |          |
11+30       0.1692      0.26  Q      V  |          |          |          |
11+35       0.1710      0.26  Q      V  |          |          |          |
11+40       0.1728      0.26  Q      V  |          |          |          |
11+45       0.1746      0.26  Q      V  |          |          |          |
11+50       0.1764      0.27  Q       V |          |          |          |
11+55       0.1783      0.27  Q       V |          |          |          |
12+ 0       0.1802      0.27  Q       V |          |          |          |
12+ 5       0.1821      0.28  Q       V |          |          |          |
12+10       0.1841      0.30  Q       V |          |          |          |
12+15       0.1863      0.33  Q       V |          |          |          |
12+20       0.1887      0.34  Q       V |          |          |          |
12+25       0.1910      0.35  Q       V |          |          |          |
12+30       0.1935      0.35  Q       V |          |          |          |
12+35       0.1960      0.36  Q       V |          |          |          |
12+40       0.1985      0.36  Q        V|          |          |          |
12+45       0.2010      0.37  Q        V|          |          |          |
12+50       0.2035      0.37  Q        V|          |          |          |
12+55       0.2061      0.37  Q        V|          |          |          |
13+ 0       0.2087      0.38  Q        V|          |          |          |
13+ 5       0.2114      0.38  Q        V|          |          |          |
13+10       0.2140      0.39  Q        V|          |          |          |
13+15       0.2167      0.39  Q        V|          |          |          |
13+20       0.2194      0.39  Q         V          |          |          |
13+25       0.2222      0.40  Q         V          |          |          |
13+30       0.2249      0.40  Q         V          |          |          |
13+35       0.2277      0.41  Q         V          |          |          |
13+40       0.2306      0.41  Q         V          |          |          |
13+45       0.2334      0.42  Q         V          |          |          |
13+50       0.2363      0.42  Q         V          |          |          |
13+55       0.2393      0.43  Q         V          |          |          |
14+ 0       0.2423      0.43  Q          |V         |          |          |
14+ 5       0.2453      0.44  Q          |V         |          |          |
14+10       0.2484      0.45  Q          |V         |          |          |
14+15       0.2515      0.45  Q          |V         |          |          |
14+20       0.2547      0.46  Q          |V         |          |          |
14+25       0.2579      0.47  Q          |V         |          |          |
14+30       0.2612      0.48  Q          |V         |          |          |
14+35       0.2645      0.49  Q          | V        |          |          |
14+40       0.2679      0.49  Q          | V        |          |          |
14+45       0.2714      0.50  Q          | V        |          |          |
14+50       0.2749      0.51  Q          | V        |          |          |
14+55       0.2786      0.53  Q          | V        |          |          |
15+ 0       0.2823      0.54  Q          | V        |          |          |
15+ 5       0.2861      0.55  Q          |  V       |          |          |
15+10       0.2900      0.57  Q          |  V       |          |          |
15+15       0.2940      0.59  Q          |  V       |          |          |
15+20       0.2982      0.60  Q          |  V       |          |          |
15+25       0.3024      0.61  Q          |  V       |          |          |
15+30       0.3062      0.56  Q          |  V       |          |          |
15+35       0.3093      0.45  Q          |   V      |          |          |
15+40       0.3123      0.43  Q          |   V      |          |          |
15+45       0.3154      0.45  Q          |   V      |          |          |
15+50       0.3187      0.48  Q          |   V      |          |          |
15+55       0.3226      0.56  Q          |   V      |          |          |
16+ 0       0.3274      0.71  Q          |   V      |          |          |
16+ 5       0.3498      3.25  |   Q      |    V     |          |          |
16+10       0.4361     12.53  |          |     Q  V |          |          |
16+15       0.5775     20.53  |          |          |     VQ   |          |
16+20       0.6336      8.14  |          Q          |       V  |          |
16+25       0.6671      4.87  |     Q    |          |          V          |
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16+30       0.6900      3.33  |   Q     |          |          |V         |
16+35       0.7066      2.41  |  Q      |          |          | V        |
16+40       0.7181      1.67  | Q       |          |          | V        |
16+45       0.7253      1.04  |Q        |          |          |  V       |
16+50       0.7311      0.84  |Q        |          |          |  V       |
16+55       0.7361      0.73  Q         |          |          |  V       |
17+ 0       0.7411      0.72  Q         |          |          |  V       |
17+ 5       0.7454      0.62  Q         |          |          |  V       |
17+10       0.7491      0.55  Q         |          |          |   V      |
17+15       0.7523      0.46  Q         |          |          |   V      |
17+20       0.7554      0.45  Q         |          |          |   V      |
17+25       0.7584      0.44  Q         |          |          |   V      |
17+30       0.7614      0.43  Q         |          |          |   V      |
17+35       0.7642      0.41  Q         |          |          |   V      |
17+40       0.7670      0.41  Q         |          |          |   V      |
17+45       0.7698      0.40  Q         |          |          |    V     |
17+50       0.7724      0.39  Q         |          |          |    V     |
17+55       0.7750      0.38  Q         |          |          |    V     |
18+ 0       0.7776      0.37  Q         |          |          |    V     |
18+ 5       0.7801      0.36  Q         |          |          |    V     |
18+10       0.7825      0.34  Q         |          |          |    V     |
18+15       0.7846      0.31  Q         |          |          |    V     |
18+20       0.7866      0.29  Q         |          |          |    V     |
18+25       0.7885      0.28  Q         |          |          |    V     |
18+30       0.7904      0.27  Q         |          |          |     V    |
18+35       0.7923      0.27  Q         |          |          |     V    |
18+40       0.7940      0.26  Q         |          |          |     V    |
18+45       0.7958      0.25  Q         |          |          |     V    |
18+50       0.7975      0.25  Q         |          |          |     V    |
18+55       0.7992      0.25  Q         |          |          |     V    |
19+ 0       0.8009      0.24  Q         |          |          |     V    |
19+ 5       0.8025      0.24  Q         |          |          |     V    |
19+10       0.8041      0.23  Q         |          |          |     V    |
19+15       0.8057      0.23  Q         |          |          |     V    |
19+20       0.8073      0.23  Q         |          |          |     V    |
19+25       0.8088      0.22  Q         |          |          |     V    |
19+30       0.8103      0.22  Q         |          |          |     V    |
19+35       0.8118      0.22  Q         |          |          |      V   |
19+40       0.8133      0.22  Q         |          |          |      V   |
19+45       0.8148      0.21  Q         |          |          |      V   |
19+50       0.8162      0.21  Q         |          |          |      V   |
19+55       0.8177      0.21  Q         |          |          |      V   |
20+ 0       0.8191      0.21  Q         |          |          |      V   |
20+ 5       0.8205      0.20  Q         |          |          |      V   |
20+10       0.8219      0.20  Q         |          |          |      V   |
20+15       0.8232      0.20  Q         |          |          |      V   |
20+20       0.8246      0.20  Q         |          |          |      V   |
20+25       0.8259      0.20  Q         |          |          |      V   |
20+30       0.8273      0.19  Q         |          |          |      V   |
20+35       0.8286      0.19  Q         |          |          |      V   |
20+40       0.8299      0.19  Q         |          |          |      V   |
20+45       0.8312      0.19  Q         |          |          |      V   |
20+50       0.8325      0.19  Q         |          |          |      V   |
20+55       0.8337      0.18  Q         |          |          |       V  |
21+ 0       0.8350      0.18  Q         |          |          |       V  |
21+ 5       0.8362      0.18  Q         |          |          |       V  |
21+10       0.8375      0.18  Q         |          |          |       V  |
21+15       0.8387      0.18  Q         |          |          |       V  |
21+20       0.8399      0.18  Q         |          |          |       V  |
21+25       0.8411      0.18  Q         |          |          |       V  |
21+30       0.8423      0.17  Q         |          |          |       V  |
21+35       0.8435      0.17  Q         |          |          |       V  |
21+40       0.8447      0.17  Q         |          |          |       V  |
21+45       0.8459      0.17  Q         |          |          |       V  |
21+50       0.8470      0.17  Q         |          |          |       V  |
21+55       0.8482      0.17  Q         |          |          |       V  |
22+ 0       0.8493      0.17  Q         |          |          |       V  |
22+ 5       0.8504      0.16  Q         |          |          |       V  |
22+10       0.8516      0.16  Q         |          |          |       V  |
22+15       0.8527      0.16  Q         |          |          |       V  |
22+20       0.8538      0.16  Q         |          |          |       V  |
```

```
   22+25       0.8549      0.16  Q          |          |          |       V |
   22+30       0.8560      0.16  Q          |          |          |        V|
   22+35       0.8571      0.16  Q          |          |          |        V|
   22+40       0.8582      0.16  Q          |          |          |        V|
   22+45       0.8592      0.16  Q          |          |          |        V|
   22+50       0.8603      0.15  Q          |          |          |        V|
   22+55       0.8614      0.15  Q          |          |          |        V|
   23+ 0       0.8624      0.15  Q          |          |          |        V|
   23+ 5       0.8635      0.15  Q          |          |          |        V|
   23+10       0.8645      0.15  Q          |          |          |        V|
   23+15       0.8655      0.15  Q          |          |          |        V|
   23+20       0.8666      0.15  Q          |          |          |        V|
   23+25       0.8676      0.15  Q          |          |          |        V|
   23+30       0.8686      0.15  Q          |          |          |        V|
   23+35       0.8696      0.15  Q          |          |          |        V|
   23+40       0.8706      0.15  Q          |          |          |        V|
   23+45       0.8716      0.15  Q          |          |          |        V|
   23+50       0.8726      0.14  Q          |          |          |        V|
   23+55       0.8736      0.14  Q          |          |          |        V|
   24+ 0       0.8746      0.14  Q          |          |          |        V|
   24+ 5       0.8755      0.14  Q          |          |          |        V|
   24+10       0.8762      0.10  Q          |          |          |        V|
   24+15       0.8766      0.05  Q          |          |          |        V|
   24+20       0.8768      0.03  Q          |          |          |        V|
   24+25       0.8769      0.02  Q          |          |          |        V|
   24+30       0.8770      0.01  Q          |          |          |        V|
   24+35       0.8771      0.01  Q          |          |          |        V|
   24+40       0.8771      0.00  Q          |          |          |        V|
   24+45       0.8771      0.00  Q          |          |          |        V|
   24+50       0.8771      0.00  Q          |          |          |        V|
   24+55       0.8771      0.00  Q          |          |          |        V|
   25+ 0       0.8771      0.00  Q          |          |          |        V|
   25+ 5       0.8771      0.00  Q          |          |          |        V|
-------------------------------------------------------------------------
```

Area 'A' – 5 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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              Study date  11/14/24

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San Bernardino County Synthetic Unit Hydrology Method
              Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
5 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

       Storm Event Year = 5

       Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
       Sub-Area        Duration        Isohyetal
       (Ac.)            (hours)         (In)
Rainfall data for year 10
           18.06           1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
           18.06           6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
           18.06          24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
           18.06           1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
           18.06           6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
           18.06          24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 70.0      51.0         18.06      1.000     0.797    1.000    0.797

Area-averaged adjusted loss rate Fm (In/Hr) =  0.797

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
18.06	1.000	70.0	51.0	9.61	0.196

Area-averaged catchment yield fraction, Y = 0.196
Area-averaged low loss fraction, Yb = 0.804
User entry of time of concentration = 0.202 (hours)
++
Watershed area = 18.06(Ac.)
Catchment Lag time = 0.162 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 51.5677
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.797(In/Hr)
Average low loss rate fraction (Yb) = 0.804 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 18.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.403(In)
30-minute factor = 0.999 Adjusted rainfall = 0.689(In)
1-hour factor = 0.999 Adjusted rainfall = 0.849(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.585(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 218.41 (CFS))	
1	4.472	9.767
2	26.592	48.314
3	64.398	82.572
4	78.587	30.990
5	86.751	17.831
6	92.030	11.532
7	95.442	7.452
8	97.482	4.455
9	98.356	1.909
10	98.889	1.165
11	99.255	0.797
12	99.630	0.821
13	99.870	0.524
14	100.000	0.283

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4027	0.4027
2	0.4958	0.0931
3	0.5600	0.0641
4	0.6105	0.0505
5	0.6527	0.0423
6	0.6894	0.0367
7	0.7220	0.0326
8	0.7516	0.0295
9	0.7786	0.0270
10	0.8036	0.0250
11	0.8269	0.0233
12	0.8488	0.0219

13	0.8921	0.0433
14	0.9342	0.0421
15	0.9751	0.0410
16	1.0150	0.0399
17	1.0540	0.0390
18	1.0922	0.0381
19	1.1295	0.0373
20	1.1661	0.0366
21	1.2021	0.0359
22	1.2374	0.0353
23	1.2720	0.0347
24	1.3062	0.0341
25	1.3397	0.0336
26	1.3728	0.0331
27	1.4054	0.0326
28	1.4376	0.0321
29	1.4693	0.0317
30	1.5006	0.0313
31	1.5315	0.0309
32	1.5620	0.0305
33	1.5922	0.0302
34	1.6221	0.0298
35	1.6516	0.0295
36	1.6808	0.0292
37	1.7096	0.0289
38	1.7382	0.0286
39	1.7664	0.0283
40	1.7945	0.0280
41	1.8222	0.0277
42	1.8497	0.0275
43	1.8769	0.0272
44	1.9039	0.0270
45	1.9307	0.0268
46	1.9572	0.0265
47	1.9836	0.0263
48	2.0097	0.0261
49	2.0356	0.0259
50	2.0613	0.0257
51	2.0868	0.0255
52	2.1121	0.0253
53	2.1373	0.0251
54	2.1623	0.0250
55	2.1870	0.0248
56	2.2117	0.0246
57	2.2361	0.0245
58	2.2604	0.0243
59	2.2846	0.0241
60	2.3085	0.0240
61	2.3324	0.0238
62	2.3560	0.0237
63	2.3796	0.0235
64	2.4030	0.0234
65	2.4262	0.0233
66	2.4494	0.0231
67	2.4724	0.0230
68	2.4952	0.0229
69	2.5179	0.0227
70	2.5406	0.0226
71	2.5630	0.0225
72	2.5854	0.0224
73	2.6066	0.0212
74	2.6277	0.0211
75	2.6486	0.0210
76	2.6695	0.0208
77	2.6902	0.0207
78	2.7109	0.0206
79	2.7314	0.0205
80	2.7518	0.0204
81	2.7721	0.0203
82	2.7923	0.0202
83	2.8124	0.0201

84	2.8324	0.0200
85	2.8523	0.0199
86	2.8722	0.0198
87	2.8919	0.0197
88	2.9115	0.0196
89	2.9310	0.0195
90	2.9505	0.0194
91	2.9699	0.0194
92	2.9891	0.0193
93	3.0083	0.0192
94	3.0274	0.0191
95	3.0464	0.0190
96	3.0654	0.0189
97	3.0842	0.0189
98	3.1030	0.0188
99	3.1217	0.0187
100	3.1404	0.0186
101	3.1589	0.0186
102	3.1774	0.0185
103	3.1958	0.0184
104	3.2141	0.0183
105	3.2324	0.0183
106	3.2506	0.0182
107	3.2687	0.0181
108	3.2867	0.0180
109	3.3047	0.0180
110	3.3226	0.0179
111	3.3405	0.0178
112	3.3583	0.0178
113	3.3760	0.0177
114	3.3936	0.0177
115	3.4112	0.0176
116	3.4287	0.0175
117	3.4462	0.0175
118	3.4636	0.0174
119	3.4810	0.0173
120	3.4982	0.0173
121	3.5155	0.0172
122	3.5326	0.0172
123	3.5497	0.0171
124	3.5668	0.0171
125	3.5838	0.0170
126	3.6007	0.0169
127	3.6176	0.0169
128	3.6345	0.0168
129	3.6512	0.0168
130	3.6680	0.0167
131	3.6847	0.0167
132	3.7013	0.0166
133	3.7178	0.0166
134	3.7344	0.0165
135	3.7508	0.0165
136	3.7673	0.0164
137	3.7836	0.0164
138	3.8000	0.0163
139	3.8162	0.0163
140	3.8325	0.0162
141	3.8486	0.0162
142	3.8648	0.0161
143	3.8809	0.0161
144	3.8969	0.0160
145	3.9129	0.0160
146	3.9289	0.0160
147	3.9448	0.0159
148	3.9606	0.0159
149	3.9764	0.0158
150	3.9922	0.0158
151	4.0079	0.0157
152	4.0236	0.0157
153	4.0393	0.0156
154	4.0549	0.0156

155	4.0705	0.0156
156	4.0860	0.0155
157	4.1015	0.0155
158	4.1169	0.0154
159	4.1323	0.0154
160	4.1477	0.0154
161	4.1630	0.0153
162	4.1783	0.0153
163	4.1935	0.0152
164	4.2087	0.0152
165	4.2239	0.0152
166	4.2391	0.0151
167	4.2541	0.0151
168	4.2692	0.0151
169	4.2842	0.0150
170	4.2992	0.0150
171	4.3142	0.0150
172	4.3291	0.0149
173	4.3440	0.0149
174	4.3588	0.0148
175	4.3736	0.0148
176	4.3884	0.0148
177	4.4031	0.0147
178	4.4179	0.0147
179	4.4325	0.0147
180	4.4472	0.0146
181	4.4618	0.0146
182	4.4764	0.0146
183	4.4909	0.0145
184	4.5054	0.0145
185	4.5199	0.0145
186	4.5343	0.0144
187	4.5487	0.0144
188	4.5631	0.0144
189	4.5775	0.0144
190	4.5918	0.0143
191	4.6061	0.0143
192	4.6203	0.0143
193	4.6346	0.0142
194	4.6488	0.0142
195	4.6629	0.0142
196	4.6771	0.0141
197	4.6912	0.0141
198	4.7053	0.0141
199	4.7193	0.0141
200	4.7334	0.0140
201	4.7473	0.0140
202	4.7613	0.0140
203	4.7753	0.0139
204	4.7892	0.0139
205	4.8030	0.0139
206	4.8169	0.0139
207	4.8307	0.0138
208	4.8445	0.0138
209	4.8583	0.0138
210	4.8720	0.0137
211	4.8858	0.0137
212	4.8995	0.0137
213	4.9131	0.0137
214	4.9268	0.0136
215	4.9404	0.0136
216	4.9540	0.0136
217	4.9675	0.0136
218	4.9811	0.0135
219	4.9946	0.0135
220	5.0081	0.0135
221	5.0215	0.0135
222	5.0350	0.0134
223	5.0484	0.0134
224	5.0618	0.0134
225	5.0751	0.0134

226	5.0885	0.0133
227	5.1018	0.0133
228	5.1151	0.0133
229	5.1284	0.0133
230	5.1416	0.0132
231	5.1548	0.0132
232	5.1680	0.0132
233	5.1812	0.0132
234	5.1943	0.0132
235	5.2075	0.0131
236	5.2206	0.0131
237	5.2337	0.0131
238	5.2467	0.0131
239	5.2598	0.0130
240	5.2728	0.0130
241	5.2858	0.0130
242	5.2987	0.0130
243	5.3117	0.0129
244	5.3246	0.0129
245	5.3375	0.0129
246	5.3504	0.0129
247	5.3633	0.0129
248	5.3761	0.0128
249	5.3889	0.0128
250	5.4017	0.0128
251	5.4145	0.0128
252	5.4273	0.0128
253	5.4400	0.0127
254	5.4527	0.0127
255	5.4654	0.0127
256	5.4781	0.0127
257	5.4908	0.0127
258	5.5034	0.0126
259	5.5160	0.0126
260	5.5286	0.0126
261	5.5412	0.0126
262	5.5537	0.0126
263	5.5663	0.0125
264	5.5788	0.0125
265	5.5913	0.0125
266	5.6038	0.0125
267	5.6162	0.0125
268	5.6287	0.0124
269	5.6411	0.0124
270	5.6535	0.0124
271	5.6659	0.0124
272	5.6783	0.0124
273	5.6906	0.0123
274	5.7029	0.0123
275	5.7152	0.0123
276	5.7275	0.0123
277	5.7398	0.0123
278	5.7521	0.0123
279	5.7643	0.0122
280	5.7765	0.0122
281	5.7887	0.0122
282	5.8009	0.0122
283	5.8131	0.0122
284	5.8252	0.0122
285	5.8374	0.0121
286	5.8495	0.0121
287	5.8616	0.0121
288	5.8737	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0097	0.0024
2	0.0121	0.0097	0.0024
3	0.0121	0.0098	0.0024

4	0.0122	0.0098	0.0024
5	0.0122	0.0098	0.0024
6	0.0122	0.0098	0.0024
7	0.0122	0.0098	0.0024
8	0.0123	0.0099	0.0024
9	0.0123	0.0099	0.0024
10	0.0123	0.0099	0.0024
11	0.0123	0.0099	0.0024
12	0.0124	0.0099	0.0024
13	0.0124	0.0100	0.0024
14	0.0124	0.0100	0.0024
15	0.0125	0.0100	0.0024
16	0.0125	0.0100	0.0024
17	0.0125	0.0101	0.0025
18	0.0125	0.0101	0.0025
19	0.0126	0.0101	0.0025
20	0.0126	0.0101	0.0025
21	0.0126	0.0102	0.0025
22	0.0127	0.0102	0.0025
23	0.0127	0.0102	0.0025
24	0.0127	0.0102	0.0025
25	0.0128	0.0103	0.0025
26	0.0128	0.0103	0.0025
27	0.0128	0.0103	0.0025
28	0.0128	0.0103	0.0025
29	0.0129	0.0104	0.0025
30	0.0129	0.0104	0.0025
31	0.0129	0.0104	0.0025
32	0.0130	0.0104	0.0025
33	0.0130	0.0105	0.0026
34	0.0130	0.0105	0.0026
35	0.0131	0.0105	0.0026
36	0.0131	0.0105	0.0026
37	0.0132	0.0106	0.0026
38	0.0132	0.0106	0.0026
39	0.0132	0.0106	0.0026
40	0.0132	0.0106	0.0026
41	0.0133	0.0107	0.0026
42	0.0133	0.0107	0.0026
43	0.0134	0.0107	0.0026
44	0.0134	0.0108	0.0026
45	0.0134	0.0108	0.0026
46	0.0135	0.0108	0.0026
47	0.0135	0.0109	0.0026
48	0.0135	0.0109	0.0027
49	0.0136	0.0109	0.0027
50	0.0136	0.0109	0.0027
51	0.0137	0.0110	0.0027
52	0.0137	0.0110	0.0027
53	0.0137	0.0111	0.0027
54	0.0138	0.0111	0.0027
55	0.0138	0.0111	0.0027
56	0.0139	0.0111	0.0027
57	0.0139	0.0112	0.0027
58	0.0139	0.0112	0.0027
59	0.0140	0.0113	0.0027
60	0.0140	0.0113	0.0028
61	0.0141	0.0113	0.0028
62	0.0141	0.0113	0.0028
63	0.0142	0.0114	0.0028
64	0.0142	0.0114	0.0028
65	0.0143	0.0115	0.0028
66	0.0143	0.0115	0.0028
67	0.0144	0.0115	0.0028
68	0.0144	0.0116	0.0028
69	0.0144	0.0116	0.0028
70	0.0145	0.0116	0.0028
71	0.0145	0.0117	0.0029
72	0.0146	0.0117	0.0029
73	0.0146	0.0118	0.0029
74	0.0147	0.0118	0.0029

75	0.0147	0.0119	0.0029
76	0.0148	0.0119	0.0029
77	0.0148	0.0119	0.0029
78	0.0149	0.0120	0.0029
79	0.0150	0.0120	0.0029
80	0.0150	0.0120	0.0029
81	0.0151	0.0121	0.0030
82	0.0151	0.0121	0.0030
83	0.0152	0.0122	0.0030
84	0.0152	0.0122	0.0030
85	0.0153	0.0123	0.0030
86	0.0153	0.0123	0.0030
87	0.0154	0.0124	0.0030
88	0.0154	0.0124	0.0030
89	0.0155	0.0125	0.0030
90	0.0156	0.0125	0.0031
91	0.0156	0.0126	0.0031
92	0.0157	0.0126	0.0031
93	0.0158	0.0127	0.0031
94	0.0158	0.0127	0.0031
95	0.0159	0.0128	0.0031
96	0.0160	0.0128	0.0031
97	0.0160	0.0129	0.0031
98	0.0161	0.0129	0.0032
99	0.0162	0.0130	0.0032
100	0.0162	0.0130	0.0032
101	0.0163	0.0131	0.0032
102	0.0164	0.0132	0.0032
103	0.0165	0.0132	0.0032
104	0.0165	0.0133	0.0032
105	0.0166	0.0134	0.0033
106	0.0167	0.0134	0.0033
107	0.0168	0.0135	0.0033
108	0.0168	0.0135	0.0033
109	0.0169	0.0136	0.0033
110	0.0170	0.0137	0.0033
111	0.0171	0.0138	0.0034
112	0.0172	0.0138	0.0034
113	0.0173	0.0139	0.0034
114	0.0173	0.0139	0.0034
115	0.0175	0.0140	0.0034
116	0.0175	0.0141	0.0034
117	0.0177	0.0142	0.0035
118	0.0177	0.0142	0.0035
119	0.0178	0.0143	0.0035
120	0.0179	0.0144	0.0035
121	0.0180	0.0145	0.0035
122	0.0181	0.0146	0.0036
123	0.0183	0.0147	0.0036
124	0.0183	0.0147	0.0036
125	0.0185	0.0149	0.0036
126	0.0186	0.0149	0.0036
127	0.0187	0.0150	0.0037
128	0.0188	0.0151	0.0037
129	0.0189	0.0152	0.0037
130	0.0190	0.0153	0.0037
131	0.0192	0.0154	0.0038
132	0.0193	0.0155	0.0038
133	0.0194	0.0156	0.0038
134	0.0195	0.0157	0.0038
135	0.0197	0.0159	0.0039
136	0.0198	0.0159	0.0039
137	0.0200	0.0161	0.0039
138	0.0201	0.0162	0.0039
139	0.0203	0.0163	0.0040
140	0.0204	0.0164	0.0040
141	0.0206	0.0166	0.0040
142	0.0207	0.0167	0.0041
143	0.0210	0.0169	0.0041
144	0.0211	0.0169	0.0041
145	0.0224	0.0180	0.0044

146	0.0225	0.0181	0.0044
147	0.0227	0.0183	0.0045
148	0.0229	0.0184	0.0045
149	0.0231	0.0186	0.0045
150	0.0233	0.0187	0.0046
151	0.0235	0.0189	0.0046
152	0.0237	0.0190	0.0046
153	0.0240	0.0193	0.0047
154	0.0241	0.0194	0.0047
155	0.0245	0.0197	0.0048
156	0.0246	0.0198	0.0048
157	0.0250	0.0201	0.0049
158	0.0251	0.0202	0.0049
159	0.0255	0.0205	0.0050
160	0.0257	0.0207	0.0050
161	0.0261	0.0210	0.0051
162	0.0263	0.0212	0.0052
163	0.0268	0.0215	0.0052
164	0.0270	0.0217	0.0053
165	0.0275	0.0221	0.0054
166	0.0277	0.0223	0.0054
167	0.0283	0.0227	0.0055
168	0.0286	0.0230	0.0056
169	0.0292	0.0235	0.0057
170	0.0295	0.0237	0.0058
171	0.0302	0.0243	0.0059
172	0.0305	0.0245	0.0060
173	0.0313	0.0252	0.0061
174	0.0317	0.0255	0.0062
175	0.0326	0.0262	0.0064
176	0.0331	0.0266	0.0065
177	0.0341	0.0274	0.0067
178	0.0347	0.0279	0.0068
179	0.0359	0.0289	0.0070
180	0.0366	0.0294	0.0072
181	0.0381	0.0307	0.0075
182	0.0390	0.0314	0.0076
183	0.0410	0.0329	0.0080
184	0.0421	0.0338	0.0083
185	0.0219	0.0176	0.0043
186	0.0233	0.0187	0.0046
187	0.0270	0.0217	0.0053
188	0.0295	0.0237	0.0058
189	0.0367	0.0295	0.0072
190	0.0423	0.0340	0.0083
191	0.0641	0.0516	0.0126
192	0.0931	0.0665	0.0266
193	0.4027	0.0665	0.3363
194	0.0505	0.0406	0.0099
195	0.0326	0.0262	0.0064
196	0.0250	0.0201	0.0049
197	0.0433	0.0348	0.0085
198	0.0399	0.0321	0.0078
199	0.0373	0.0300	0.0073
200	0.0353	0.0284	0.0069
201	0.0336	0.0270	0.0066
202	0.0321	0.0258	0.0063
203	0.0309	0.0249	0.0061
204	0.0298	0.0240	0.0059
205	0.0289	0.0232	0.0057
206	0.0280	0.0225	0.0055
207	0.0272	0.0219	0.0053
208	0.0265	0.0213	0.0052
209	0.0259	0.0208	0.0051
210	0.0253	0.0204	0.0050
211	0.0248	0.0199	0.0049
212	0.0243	0.0195	0.0048
213	0.0238	0.0192	0.0047
214	0.0234	0.0188	0.0046
215	0.0230	0.0185	0.0045
216	0.0226	0.0182	0.0044

217	0.0212	0.0170	0.0042
218	0.0208	0.0168	0.0041
219	0.0205	0.0165	0.0040
220	0.0202	0.0162	0.0040
221	0.0199	0.0160	0.0039
222	0.0196	0.0158	0.0038
223	0.0194	0.0156	0.0038
224	0.0191	0.0154	0.0037
225	0.0189	0.0152	0.0037
226	0.0186	0.0150	0.0037
227	0.0184	0.0148	0.0036
228	0.0182	0.0146	0.0036
229	0.0180	0.0145	0.0035
230	0.0178	0.0143	0.0035
231	0.0176	0.0141	0.0034
232	0.0174	0.0140	0.0034
233	0.0172	0.0138	0.0034
234	0.0171	0.0137	0.0033
235	0.0169	0.0136	0.0033
236	0.0167	0.0134	0.0033
237	0.0166	0.0133	0.0032
238	0.0164	0.0132	0.0032
239	0.0163	0.0131	0.0032
240	0.0161	0.0130	0.0032
241	0.0160	0.0129	0.0031
242	0.0159	0.0128	0.0031
243	0.0157	0.0126	0.0031
244	0.0156	0.0125	0.0031
245	0.0155	0.0124	0.0030
246	0.0154	0.0124	0.0030
247	0.0152	0.0123	0.0030
248	0.0151	0.0122	0.0030
249	0.0150	0.0121	0.0029
250	0.0149	0.0120	0.0029
251	0.0148	0.0119	0.0029
252	0.0147	0.0118	0.0029
253	0.0146	0.0117	0.0029
254	0.0145	0.0117	0.0028
255	0.0144	0.0116	0.0028
256	0.0143	0.0115	0.0028
257	0.0142	0.0114	0.0028
258	0.0141	0.0114	0.0028
259	0.0141	0.0113	0.0028
260	0.0140	0.0112	0.0027
261	0.0139	0.0112	0.0027
262	0.0138	0.0111	0.0027
263	0.0137	0.0110	0.0027
264	0.0136	0.0110	0.0027
265	0.0136	0.0109	0.0027
266	0.0135	0.0108	0.0026
267	0.0134	0.0108	0.0026
268	0.0133	0.0107	0.0026
269	0.0133	0.0107	0.0026
270	0.0132	0.0106	0.0026
271	0.0131	0.0106	0.0026
272	0.0131	0.0105	0.0026
273	0.0130	0.0104	0.0025
274	0.0129	0.0104	0.0025
275	0.0129	0.0103	0.0025
276	0.0128	0.0103	0.0025
277	0.0127	0.0102	0.0025
278	0.0127	0.0102	0.0025
279	0.0126	0.0101	0.0025
280	0.0126	0.0101	0.0025
281	0.0125	0.0100	0.0025
282	0.0124	0.0100	0.0024
283	0.0124	0.0100	0.0024
284	0.0123	0.0099	0.0024
285	0.0123	0.0099	0.0024
286	0.0122	0.0098	0.0024
287	0.0122	0.0098	0.0024

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      288             0.0121          0.0097             0.0024
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      4.46(In)
      Total effective rainfall =      1.42(In)
      Peak flow rate in flood hydrograph =     29.57(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0002      0.02  Q          |          |          |          |
  0+10       0.0011      0.14  Q          |          |          |          |
  0+15       0.0034      0.33  Q          |          |          |          |
  0+20       0.0062      0.41  Q          |          |          |          |
  0+25       0.0093      0.45  Q          |          |          |          |
  0+30       0.0126      0.48  Q          |          |          |          |
  0+35       0.0160      0.50  Q          |          |          |          |
  0+40       0.0195      0.51  Q          |          |          |          |
  0+45       0.0231      0.51  Q          |          |          |          |
  0+50       0.0267      0.52  Q          |          |          |          |
  0+55       0.0303      0.52  Q          |          |          |          |
  1+ 0       0.0339      0.52  Q          |          |          |          |
  1+ 5       0.0375      0.53  Q          |          |          |          |
  1+10       0.0412      0.53  Q          |          |          |          |
  1+15       0.0448      0.53  Q          |          |          |          |
  1+20       0.0485      0.53  Q          |          |          |          |
  1+25       0.0521      0.53  Q          |          |          |          |
  1+30       0.0558      0.53  QV         |          |          |          |
  1+35       0.0595      0.54  QV         |          |          |          |
  1+40       0.0632      0.54  QV         |          |          |          |
  1+45       0.0669      0.54  QV         |          |          |          |
  1+50       0.0706      0.54  QV         |          |          |          |
  1+55       0.0743      0.54  QV         |          |          |          |
  2+ 0       0.0781      0.54  QV         |          |          |          |
  2+ 5       0.0818      0.54  QV         |          |          |          |
  2+10       0.0856      0.54  QV         |          |          |          |
  2+15       0.0893      0.55  QV         |          |          |          |
  2+20       0.0931      0.55  QV         |          |          |          |
  2+25       0.0969      0.55  QV         |          |          |          |
  2+30       0.1006      0.55  QV         |          |          |          |
  2+35       0.1044      0.55  QV         |          |          |          |
  2+40       0.1082      0.55  Q V        |          |          |          |
  2+45       0.1120      0.55  Q V        |          |          |          |
  2+50       0.1159      0.56  Q V        |          |          |          |
  2+55       0.1197      0.56  Q V        |          |          |          |
  3+ 0       0.1235      0.56  Q V        |          |          |          |
  3+ 5       0.1274      0.56  Q V        |          |          |          |
  3+10       0.1313      0.56  Q V        |          |          |          |
  3+15       0.1351      0.56  Q V        |          |          |          |
  3+20       0.1390      0.56  Q V        |          |          |          |
  3+25       0.1429      0.57  Q V        |          |          |          |
  3+30       0.1468      0.57  Q V        |          |          |          |
  3+35       0.1507      0.57  Q V        |          |          |          |
  3+40       0.1546      0.57  Q V        |          |          |          |
  3+45       0.1586      0.57  Q V        |          |          |          |
  3+50       0.1625      0.57  Q  V       |          |          |          |
  3+55       0.1665      0.57  Q  V       |          |          |          |
  4+ 0       0.1704      0.58  Q  V       |          |          |          |
  4+ 5       0.1744      0.58  Q  V       |          |          |          |
  4+10       0.1784      0.58  Q  V       |          |          |          |
  4+15       0.1824      0.58  Q  V       |          |          |          |
  4+20       0.1864      0.58  Q  V       |          |          |          |
  4+25       0.1904      0.58  Q  V       |          |          |          |
  4+30       0.1945      0.59  Q  V       |          |          |          |
  4+35       0.1985      0.59  Q  V       |          |          |          |
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 4+40       0.2026      0.59  Q  V      |          |          |          |
 4+45       0.2067      0.59  Q  V      |          |          |          |
 4+50       0.2107      0.59  Q  V      |          |          |          |
 4+55       0.2148      0.59  Q   V     |          |          |          |
 5+ 0       0.2189      0.60  Q   V     |          |          |          |
 5+ 5       0.2231      0.60  Q   V     |          |          |          |
 5+10       0.2272      0.60  Q   V     |          |          |          |
 5+15       0.2313      0.60  Q   V     |          |          |          |
 5+20       0.2355      0.60  Q   V     |          |          |          |
 5+25       0.2397      0.61  Q   V     |          |          |          |
 5+30       0.2438      0.61  Q   V     |          |          |          |
 5+35       0.2480      0.61  Q   V     |          |          |          |
 5+40       0.2523      0.61  Q   V     |          |          |          |
 5+45       0.2565      0.61  Q   V     |          |          |          |
 5+50       0.2607      0.62  Q   V     |          |          |          |
 5+55       0.2650      0.62  Q   V     |          |          |          |
 6+ 0       0.2692      0.62  Q    V    |          |          |          |
 6+ 5       0.2735      0.62  Q    V    |          |          |          |
 6+10       0.2778      0.62  Q    V    |          |          |          |
 6+15       0.2821      0.63  Q    V    |          |          |          |
 6+20       0.2864      0.63  Q    V    |          |          |          |
 6+25       0.2908      0.63  Q    V    |          |          |          |
 6+30       0.2951      0.63  Q    V    |          |          |          |
 6+35       0.2995      0.63  Q    V    |          |          |          |
 6+40       0.3039      0.64  Q    V    |          |          |          |
 6+45       0.3083      0.64  Q    V    |          |          |          |
 6+50       0.3127      0.64  Q    V    |          |          |          |
 6+55       0.3171      0.64  Q    V    |          |          |          |
 7+ 0       0.3216      0.65  Q     V   |          |          |          |
 7+ 5       0.3260      0.65  Q     V   |          |          |          |
 7+10       0.3305      0.65  Q     V   |          |          |          |
 7+15       0.3350      0.65  Q     V   |          |          |          |
 7+20       0.3395      0.66  Q     V   |          |          |          |
 7+25       0.3441      0.66  Q     V   |          |          |          |
 7+30       0.3486      0.66  Q     V   |          |          |          |
 7+35       0.3532      0.66  Q     V   |          |          |          |
 7+40       0.3578      0.67  Q     V   |          |          |          |
 7+45       0.3624      0.67  Q     V   |          |          |          |
 7+50       0.3670      0.67  Q     V   |          |          |          |
 7+55       0.3716      0.67  Q     V   |          |          |          |
 8+ 0       0.3763      0.68  Q      V  |          |          |          |
 8+ 5       0.3810      0.68  Q      V  |          |          |          |
 8+10       0.3857      0.68  Q      V  |          |          |          |
 8+15       0.3904      0.69  Q      V  |          |          |          |
 8+20       0.3951      0.69  Q      V  |          |          |          |
 8+25       0.3999      0.69  Q      V  |          |          |          |
 8+30       0.4047      0.69  Q      V  |          |          |          |
 8+35       0.4095      0.70  Q      V  |          |          |          |
 8+40       0.4143      0.70  Q      V  |          |          |          |
 8+45       0.4191      0.70  Q      V  |          |          |          |
 8+50       0.4240      0.71  Q      V  |          |          |          |
 8+55       0.4289      0.71  Q       V |          |          |          |
 9+ 0       0.4338      0.71  Q       V |          |          |          |
 9+ 5       0.4387      0.72  Q       V |          |          |          |
 9+10       0.4437      0.72  Q       V |          |          |          |
 9+15       0.4487      0.72  Q       V |          |          |          |
 9+20       0.4537      0.73  Q       V |          |          |          |
 9+25       0.4587      0.73  Q       V |          |          |          |
 9+30       0.4637      0.73  Q       V |          |          |          |
 9+35       0.4688      0.74  Q       V |          |          |          |
 9+40       0.4739      0.74  Q       V |          |          |          |
 9+45       0.4791      0.75  Q       V |          |          |          |
 9+50       0.4842      0.75  Q        V|          |          |          |
 9+55       0.4894      0.75  |Q       V|          |          |          |
10+ 0       0.4946      0.76  |Q       V|          |          |          |
10+ 5       0.4999      0.76  |Q       V|          |          |          |
10+10       0.5051      0.77  |Q       V|          |          |          |
10+15       0.5104      0.77  |Q       V|          |          |          |
10+20       0.5158      0.77  |Q       V|          |          |          |
10+25       0.5211      0.78  |Q       V|          |          |          |
10+30       0.5265      0.78  |Q       V|          |          |          |
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10+35       0.5320      0.79  |Q       V|         |          |         |
10+40       0.5374      0.79  |Q        V         |          |         |
10+45       0.5429      0.80  |Q        V         |          |         |
10+50       0.5484      0.80  |Q        V         |          |         |
10+55       0.5540      0.81  |Q        V         |          |         |
11+ 0       0.5596      0.81  |Q        V         |          |         |
11+ 5       0.5652      0.82  |Q        V         |          |         |
11+10       0.5709      0.82  |Q        V         |          |         |
11+15       0.5766      0.83  |Q        V         |          |         |
11+20       0.5824      0.83  |Q        V         |          |         |
11+25       0.5882      0.84  |Q        |V         |          |         |
11+30       0.5940      0.85  |Q        |V         |          |         |
11+35       0.5999      0.85  |Q        |V         |          |         |
11+40       0.6058      0.86  |Q        |V         |          |         |
11+45       0.6117      0.87  |Q        |V         |          |         |
11+50       0.6177      0.87  |Q        |V         |          |         |
11+55       0.6238      0.88  |Q        |V         |          |         |
12+ 0       0.6299      0.89  |Q        |V         |          |         |
12+ 5       0.6361      0.89  |Q        |V         |          |         |
12+10       0.6423      0.91  |Q        | V        |          |         |
12+15       0.6488      0.94  |Q        | V        |          |         |
12+20       0.6553      0.95  |Q        | V        |          |         |
12+25       0.6620      0.96  |Q        | V        |          |         |
12+30       0.6687      0.97  |Q        | V        |          |         |
12+35       0.6754      0.98  |Q        | V        |          |         |
12+40       0.6823      0.99  |Q        | V        |          |         |
12+45       0.6891      1.00  |Q        | V        |          |         |
12+50       0.6961      1.01  |Q        |  V       |          |         |
12+55       0.7031      1.02  |Q        |  V       |          |         |
13+ 0       0.7102      1.03  |Q        |  V       |          |         |
13+ 5       0.7174      1.04  |Q        |  V       |          |         |
13+10       0.7246      1.05  |Q        |  V       |          |         |
13+15       0.7319      1.06  |Q        |  V       |          |         |
13+20       0.7393      1.07  |Q        |  V       |          |         |
13+25       0.7468      1.08  |Q        |   V      |          |         |
13+30       0.7544      1.10  |Q        |   V      |          |         |
13+35       0.7620      1.11  |Q        |   V      |          |         |
13+40       0.7697      1.12  |Q        |   V      |          |         |
13+45       0.7776      1.14  |Q        |   V      |          |         |
13+50       0.7855      1.15  |Q        |   V      |          |         |
13+55       0.7935      1.17  |Q        |   V      |          |         |
14+ 0       0.8017      1.18  |Q        |    V     |          |         |
14+ 5       0.8099      1.20  |Q        |    V     |          |         |
14+10       0.8183      1.22  |Q        |    V     |          |         |
14+15       0.8268      1.24  |Q        |    V     |          |         |
14+20       0.8355      1.26  |Q        |    V     |          |         |
14+25       0.8443      1.28  |Q        |    V     |          |         |
14+30       0.8533      1.30  |Q        |     V    |          |         |
14+35       0.8624      1.33  |Q        |     V    |          |         |
14+40       0.8717      1.35  |Q        |     V    |          |         |
14+45       0.8812      1.38  |Q        |     V    |          |         |
14+50       0.8909      1.41  |Q        |     V    |          |         |
14+55       0.9008      1.44  |Q        |     V    |          |         |
15+ 0       0.9109      1.47  |Q        |      V   |          |         |
15+ 5       0.9214      1.51  | Q       |      V   |          |         |
15+10       0.9321      1.56  | Q       |      V   |          |         |
15+15       0.9431      1.60  | Q       |      V   |          |         |
15+20       0.9546      1.66  | Q       |      V   |          |         |
15+25       0.9661      1.68  | Q       |       V  |          |         |
15+30       0.9766      1.53  | Q       |       V  |          |         |
15+35       0.9851      1.24  |Q        |       V  |          |         |
15+40       0.9933      1.19  |Q        |       V  |          |         |
15+45       1.0018      1.23  |Q        |       V  |          |         |
15+50       1.0111      1.34  |Q        |       V  |          |         |
15+55       1.0218      1.55  | Q       |        V |          |         |
16+ 0       1.0358      2.04  | Q       |        V |          |         |
16+ 5       1.0782      6.16  |       Q |         V          |         |
16+10       1.2109     19.26  |         |          | V  Q     |         |
16+15       1.4145     29.57  |         |          |     V    |        Q|
16+20       1.4995     12.34  |         |     Q    |       V  |         |
16+25       1.5520      7.62  |         Q          |        V|         |
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16+30       1.5894      5.44  |       Q  |          |         V|          |
16+35       1.6184      4.20  |     Q    |          |          V          |
16+40       1.6401      3.15  |    Q     |          |          V          |
16+45       1.6555      2.24  |  Q       |          |          |V         |
16+50       1.6688      1.93  |  Q       |          |          |V         |
16+55       1.6808      1.75  |  Q       |          |          |V         |
17+ 0       1.6925      1.70  |  Q       |          |          |V         |
17+ 5       1.7031      1.54  |  Q       |          |          |V         |
17+10       1.7128      1.41  |Q         |          |          | V        |
17+15       1.7215      1.27  |Q         |          |          | V        |
17+20       1.7300      1.23  |Q         |          |          | V        |
17+25       1.7382      1.19  |Q         |          |          | V        |
17+30       1.7462      1.16  |Q         |          |          | V        |
17+35       1.7540      1.13  |Q         |          |          | V        |
17+40       1.7616      1.10  |Q         |          |          |  V       |
17+45       1.7690      1.08  |Q         |          |          |  V       |
17+50       1.7763      1.06  |Q         |          |          |  V       |
17+55       1.7834      1.04  |Q         |          |          |  V       |
18+ 0       1.7904      1.02  |Q         |          |          |  V       |
18+ 5       1.7973      1.00  |Q         |          |          |  V       |
18+10       1.8039      0.97  |Q         |          |          |  V       |
18+15       1.8104      0.93  |Q         |          |          |  V       |
18+20       1.8167      0.91  |Q         |          |          |   V      |
18+25       1.8228      0.89  |Q         |          |          |   V      |
18+30       1.8289      0.88  |Q         |          |          |   V      |
18+35       1.8348      0.86  |Q         |          |          |   V      |
18+40       1.8407      0.85  |Q         |          |          |   V      |
18+45       1.8464      0.84  |Q         |          |          |   V      |
18+50       1.8521      0.83  |Q         |          |          |   V      |
18+55       1.8577      0.82  |Q         |          |          |   V      |
19+ 0       1.8633      0.80  |Q         |          |          |   V      |
19+ 5       1.8688      0.79  |Q         |          |          |    V     |
19+10       1.8742      0.79  |Q         |          |          |    V     |
19+15       1.8795      0.78  |Q         |          |          |    V     |
19+20       1.8848      0.77  |Q         |          |          |    V     |
19+25       1.8900      0.76  |Q         |          |          |    V     |
19+30       1.8952      0.75  |Q         |          |          |    V     |
19+35       1.9003      0.74  Q          |          |          |    V     |
19+40       1.9054      0.74  Q          |          |          |    V     |
19+45       1.9104      0.73  Q          |          |          |    V     |
19+50       1.9153      0.72  Q          |          |          |    V     |
19+55       1.9203      0.71  Q          |          |          |     V    |
20+ 0       1.9251      0.71  Q          |          |          |     V    |
20+ 5       1.9300      0.70  Q          |          |          |     V    |
20+10       1.9348      0.69  Q          |          |          |     V    |
20+15       1.9395      0.69  Q          |          |          |     V    |
20+20       1.9442      0.68  Q          |          |          |     V    |
20+25       1.9489      0.68  Q          |          |          |     V    |
20+30       1.9535      0.67  Q          |          |          |     V    |
20+35       1.9581      0.67  Q          |          |          |     V    |
20+40       1.9626      0.66  Q          |          |          |     V    |
20+45       1.9672      0.66  Q          |          |          |     V    |
20+50       1.9716      0.65  Q          |          |          |     V    |
20+55       1.9761      0.65  Q          |          |          |      V   |
21+ 0       1.9805      0.64  Q          |          |          |      V   |
21+ 5       1.9849      0.64  Q          |          |          |      V   |
21+10       1.9893      0.63  Q          |          |          |      V   |
21+15       1.9936      0.63  Q          |          |          |      V   |
21+20       1.9979      0.62  Q          |          |          |      V   |
21+25       2.0022      0.62  Q          |          |          |      V   |
21+30       2.0064      0.62  Q          |          |          |      V   |
21+35       2.0106      0.61  Q          |          |          |      V   |
21+40       2.0148      0.61  Q          |          |          |      V   |
21+45       2.0190      0.60  Q          |          |          |      V   |
21+50       2.0231      0.60  Q          |          |          |      V   |
21+55       2.0272      0.60  Q          |          |          |       V  |
22+ 0       2.0313      0.59  Q          |          |          |       V  |
22+ 5       2.0354      0.59  Q          |          |          |       V  |
22+10       2.0394      0.59  Q          |          |          |       V  |
22+15       2.0434      0.58  Q          |          |          |       V  |
22+20       2.0474      0.58  Q          |          |          |       V  |
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   22+25       2.0514      0.58  Q          |          |          |       V |
   22+30       2.0553      0.57  Q          |          |          |       V |
   22+35       2.0593      0.57  Q          |          |          |       V |
   22+40       2.0632      0.57  Q          |          |          |       V |
   22+45       2.0670      0.56  Q          |          |          |       V |
   22+50       2.0709      0.56  Q          |          |          |       V |
   22+55       2.0748      0.56  Q          |          |          |       V |
   23+ 0       2.0786      0.56  Q          |          |          |       V |
   23+ 5       2.0824      0.55  Q          |          |          |        V|
   23+10       2.0862      0.55  Q          |          |          |        V|
   23+15       2.0899      0.55  Q          |          |          |        V|
   23+20       2.0937      0.54  Q          |          |          |        V|
   23+25       2.0974      0.54  Q          |          |          |        V|
   23+30       2.1011      0.54  Q          |          |          |        V|
   23+35       2.1048      0.54  Q          |          |          |        V|
   23+40       2.1085      0.53  Q          |          |          |        V|
   23+45       2.1122      0.53  Q          |          |          |        V|
   23+50       2.1158      0.53  Q          |          |          |        V|
   23+55       2.1195      0.53  Q          |          |          |        V|
   24+ 0       2.1231      0.52  Q          |          |          |        V|
   24+ 5       2.1265      0.50  Q          |          |          |        V|
   24+10       2.1292      0.38  Q          |          |          |        V|
   24+15       2.1304      0.19  Q          |          |          |        V|
   24+20       2.1312      0.11  Q          |          |          |        V|
   24+25       2.1317      0.07  Q          |          |          |        V|
   24+30       2.1320      0.04  Q          |          |          |        V|
   24+35       2.1321      0.02  Q          |          |          |        V|
   24+40       2.1322      0.01  Q          |          |          |        V|
   24+45       2.1323      0.01  Q          |          |          |        V|
   24+50       2.1323      0.01  Q          |          |          |        V|
   24+55       2.1323      0.00  Q          |          |          |        V|
   25+ 0       2.1324      0.00  Q          |          |          |        V|
   25+ 5       2.1324      0.00  Q          |          |          |         V
-------------------------------------------------------------------------
```

Area 'A' – 10 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  11/14/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
10 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            18.06            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            18.06            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            18.06           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            18.06            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            18.06            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            18.06           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 70.0      70.0         18.06      1.000     0.532    1.000    0.532

Area-averaged adjusted loss rate Fm (In/Hr) =  0.532

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
18.06	1.000	70.0	70.0	4.29	0.530

Area-averaged catchment yield fraction, Y = 0.530
Area-averaged low loss fraction, Yb = 0.470
User entry of time of concentration = 0.202 (hours)
++
Watershed area = 18.06(Ac.)
Catchment Lag time = 0.162 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 51.5677
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.532(In/Hr)
Average low loss rate fraction (Yb) = 0.470 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 18.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.474(In)
30-minute factor = 0.999 Adjusted rainfall = 0.812(In)
1-hour factor = 0.999 Adjusted rainfall = 0.999(In)
3-hour factor = 1.000 Adjusted rainfall = 1.973(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 218.41 (CFS))	
1	4.472	9.767
2	26.592	48.314
3	64.398	82.572
4	78.587	30.990
5	86.751	17.831
6	92.030	11.532
7	95.442	7.452
8	97.482	4.455
9	98.356	1.909
10	98.889	1.165
11	99.255	0.797
12	99.630	0.821
13	99.870	0.524
14	100.000	0.283

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4741	0.4741
2	0.5837	0.1096
3	0.6592	0.0755
4	0.7186	0.0594
5	0.7684	0.0498
6	0.8116	0.0432
7	0.8500	0.0384
8	0.8847	0.0347
9	0.9165	0.0318
10	0.9460	0.0294
11	0.9734	0.0274
12	0.9992	0.0257

13	1.0499	0.0508
14	1.0992	0.0493
15	1.1472	0.0480
16	1.1939	0.0468
17	1.2396	0.0457
18	1.2843	0.0447
19	1.3280	0.0437
20	1.3708	0.0428
21	1.4129	0.0420
22	1.4541	0.0413
23	1.4947	0.0406
24	1.5346	0.0399
25	1.5739	0.0393
26	1.6126	0.0387
27	1.6507	0.0381
28	1.6883	0.0376
29	1.7254	0.0371
30	1.7620	0.0366
31	1.7981	0.0361
32	1.8338	0.0357
33	1.8691	0.0353
34	1.9039	0.0349
35	1.9384	0.0345
36	1.9725	0.0341
37	2.0062	0.0337
38	2.0396	0.0334
39	2.0726	0.0330
40	2.1053	0.0327
41	2.1377	0.0324
42	2.1698	0.0321
43	2.2016	0.0318
44	2.2332	0.0315
45	2.2644	0.0313
46	2.2954	0.0310
47	2.3262	0.0307
48	2.3566	0.0305
49	2.3869	0.0302
50	2.4169	0.0300
51	2.4467	0.0298
52	2.4762	0.0296
53	2.5056	0.0293
54	2.5347	0.0291
55	2.5637	0.0289
56	2.5924	0.0287
57	2.6209	0.0285
58	2.6493	0.0283
59	2.6774	0.0282
60	2.7054	0.0280
61	2.7332	0.0278
62	2.7608	0.0276
63	2.7883	0.0275
64	2.8156	0.0273
65	2.8427	0.0271
66	2.8697	0.0270
67	2.8965	0.0268
68	2.9232	0.0267
69	2.9497	0.0265
70	2.9760	0.0264
71	3.0023	0.0262
72	3.0283	0.0261
73	3.0549	0.0266
74	3.0814	0.0265
75	3.1077	0.0263
76	3.1339	0.0262
77	3.1600	0.0261
78	3.1859	0.0259
79	3.2118	0.0258
80	3.2375	0.0257
81	3.2631	0.0256
82	3.2885	0.0255
83	3.3139	0.0254

84	3.3392	0.0253
85	3.3643	0.0251
86	3.3893	0.0250
87	3.4143	0.0249
88	3.4391	0.0248
89	3.4638	0.0247
90	3.4884	0.0246
91	3.5129	0.0245
92	3.5373	0.0244
93	3.5617	0.0243
94	3.5859	0.0242
95	3.6100	0.0241
96	3.6341	0.0240
97	3.6580	0.0239
98	3.6819	0.0239
99	3.7056	0.0238
100	3.7293	0.0237
101	3.7529	0.0236
102	3.7764	0.0235
103	3.7998	0.0234
104	3.8232	0.0233
105	3.8464	0.0233
106	3.8696	0.0232
107	3.8927	0.0231
108	3.9157	0.0230
109	3.9387	0.0229
110	3.9615	0.0229
111	3.9843	0.0228
112	4.0070	0.0227
113	4.0297	0.0226
114	4.0522	0.0226
115	4.0747	0.0225
116	4.0972	0.0224
117	4.1195	0.0224
118	4.1418	0.0223
119	4.1640	0.0222
120	4.1861	0.0221
121	4.2082	0.0221
122	4.2302	0.0220
123	4.2522	0.0219
124	4.2741	0.0219
125	4.2959	0.0218
126	4.3176	0.0218
127	4.3393	0.0217
128	4.3609	0.0216
129	4.3825	0.0216
130	4.4040	0.0215
131	4.4254	0.0214
132	4.4468	0.0214
133	4.4681	0.0213
134	4.4894	0.0213
135	4.5106	0.0212
136	4.5318	0.0211
137	4.5528	0.0211
138	4.5739	0.0210
139	4.5949	0.0210
140	4.6158	0.0209
141	4.6367	0.0209
142	4.6575	0.0208
143	4.6782	0.0208
144	4.6989	0.0207
145	4.7196	0.0207
146	4.7402	0.0206
147	4.7607	0.0206
148	4.7812	0.0205
149	4.8017	0.0205
150	4.8221	0.0204
151	4.8424	0.0204
152	4.8627	0.0203
153	4.8830	0.0203
154	4.9032	0.0202

155	4.9234	0.0202
156	4.9435	0.0201
157	4.9635	0.0201
158	4.9835	0.0200
159	5.0035	0.0200
160	5.0234	0.0199
161	5.0433	0.0199
162	5.0631	0.0198
163	5.0829	0.0198
164	5.1027	0.0197
165	5.1224	0.0197
166	5.1420	0.0197
167	5.1616	0.0196
168	5.1812	0.0196
169	5.2007	0.0195
170	5.2202	0.0195
171	5.2397	0.0194
172	5.2591	0.0194
173	5.2784	0.0194
174	5.2977	0.0193
175	5.3170	0.0193
176	5.3362	0.0192
177	5.3554	0.0192
178	5.3746	0.0192
179	5.3937	0.0191
180	5.4128	0.0191
181	5.4318	0.0190
182	5.4508	0.0190
183	5.4698	0.0190
184	5.4887	0.0189
185	5.5076	0.0189
186	5.5265	0.0189
187	5.5453	0.0188
188	5.5640	0.0188
189	5.5828	0.0187
190	5.6015	0.0187
191	5.6202	0.0187
192	5.6388	0.0186
193	5.6574	0.0186
194	5.6759	0.0186
195	5.6945	0.0185
196	5.7130	0.0185
197	5.7314	0.0185
198	5.7498	0.0184
199	5.7682	0.0184
200	5.7866	0.0184
201	5.8049	0.0183
202	5.8232	0.0183
203	5.8415	0.0183
204	5.8597	0.0182
205	5.8779	0.0182
206	5.8960	0.0182
207	5.9141	0.0181
208	5.9322	0.0181
209	5.9503	0.0181
210	5.9683	0.0180
211	5.9863	0.0180
212	6.0043	0.0180
213	6.0222	0.0179
214	6.0401	0.0179
215	6.0580	0.0179
216	6.0758	0.0178
217	6.0937	0.0178
218	6.1114	0.0178
219	6.1292	0.0178
220	6.1469	0.0177
221	6.1646	0.0177
222	6.1823	0.0177
223	6.1999	0.0176
224	6.2175	0.0176
225	6.2351	0.0176

226	6.2526	0.0175
227	6.2702	0.0175
228	6.2877	0.0175
229	6.3051	0.0175
230	6.3226	0.0174
231	6.3400	0.0174
232	6.3574	0.0174
233	6.3747	0.0174
234	6.3920	0.0173
235	6.4093	0.0173
236	6.4266	0.0173
237	6.4438	0.0172
238	6.4611	0.0172
239	6.4783	0.0172
240	6.4954	0.0172
241	6.5126	0.0171
242	6.5297	0.0171
243	6.5468	0.0171
244	6.5638	0.0171
245	6.5809	0.0170
246	6.5979	0.0170
247	6.6149	0.0170
248	6.6318	0.0170
249	6.6488	0.0169
250	6.6657	0.0169
251	6.6826	0.0169
252	6.6994	0.0169
253	6.7163	0.0168
254	6.7331	0.0168
255	6.7499	0.0168
256	6.7666	0.0168
257	6.7834	0.0167
258	6.8001	0.0167
259	6.8168	0.0167
260	6.8335	0.0167
261	6.8501	0.0166
262	6.8667	0.0166
263	6.8833	0.0166
264	6.8999	0.0166
265	6.9165	0.0166
266	6.9330	0.0165
267	6.9495	0.0165
268	6.9660	0.0165
269	6.9824	0.0165
270	6.9989	0.0164
271	7.0153	0.0164
272	7.0317	0.0164
273	7.0481	0.0164
274	7.0644	0.0164
275	7.0807	0.0163
276	7.0971	0.0163
277	7.1133	0.0163
278	7.1296	0.0163
279	7.1459	0.0162
280	7.1621	0.0162
281	7.1783	0.0162
282	7.1945	0.0162
283	7.2106	0.0162
284	7.2268	0.0161
285	7.2429	0.0161
286	7.2590	0.0161
287	7.2750	0.0161
288	7.2911	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0076	0.0085
2	0.0161	0.0076	0.0085
3	0.0161	0.0076	0.0085

4	0.0161	0.0076	0.0085
5	0.0162	0.0076	0.0086
6	0.0162	0.0076	0.0086
7	0.0162	0.0076	0.0086
8	0.0163	0.0077	0.0086
9	0.0163	0.0077	0.0086
10	0.0163	0.0077	0.0086
11	0.0164	0.0077	0.0087
12	0.0164	0.0077	0.0087
13	0.0164	0.0077	0.0087
14	0.0165	0.0077	0.0087
15	0.0165	0.0078	0.0087
16	0.0165	0.0078	0.0088
17	0.0166	0.0078	0.0088
18	0.0166	0.0078	0.0088
19	0.0166	0.0078	0.0088
20	0.0167	0.0078	0.0088
21	0.0167	0.0079	0.0089
22	0.0167	0.0079	0.0089
23	0.0168	0.0079	0.0089
24	0.0168	0.0079	0.0089
25	0.0169	0.0079	0.0089
26	0.0169	0.0079	0.0089
27	0.0169	0.0080	0.0090
28	0.0170	0.0080	0.0090
29	0.0170	0.0080	0.0090
30	0.0170	0.0080	0.0090
31	0.0171	0.0080	0.0091
32	0.0171	0.0080	0.0091
33	0.0172	0.0081	0.0091
34	0.0172	0.0081	0.0091
35	0.0172	0.0081	0.0091
36	0.0173	0.0081	0.0091
37	0.0173	0.0081	0.0092
38	0.0174	0.0082	0.0092
39	0.0174	0.0082	0.0092
40	0.0174	0.0082	0.0092
41	0.0175	0.0082	0.0093
42	0.0175	0.0082	0.0093
43	0.0176	0.0083	0.0093
44	0.0176	0.0083	0.0093
45	0.0177	0.0083	0.0094
46	0.0177	0.0083	0.0094
47	0.0178	0.0084	0.0094
48	0.0178	0.0084	0.0094
49	0.0178	0.0084	0.0095
50	0.0179	0.0084	0.0095
51	0.0179	0.0084	0.0095
52	0.0180	0.0085	0.0095
53	0.0180	0.0085	0.0095
54	0.0181	0.0085	0.0096
55	0.0181	0.0085	0.0096
56	0.0182	0.0085	0.0096
57	0.0182	0.0086	0.0097
58	0.0183	0.0086	0.0097
59	0.0183	0.0086	0.0097
60	0.0184	0.0086	0.0097
61	0.0184	0.0087	0.0098
62	0.0185	0.0087	0.0098
63	0.0185	0.0087	0.0098
64	0.0186	0.0087	0.0098
65	0.0186	0.0088	0.0099
66	0.0187	0.0088	0.0099
67	0.0187	0.0088	0.0099
68	0.0188	0.0088	0.0099
69	0.0189	0.0089	0.0100
70	0.0189	0.0089	0.0100
71	0.0190	0.0089	0.0100
72	0.0190	0.0089	0.0101
73	0.0191	0.0090	0.0101
74	0.0191	0.0090	0.0101

75	0.0192	0.0090	0.0102
76	0.0192	0.0090	0.0102
77	0.0193	0.0091	0.0102
78	0.0194	0.0091	0.0103
79	0.0194	0.0091	0.0103
80	0.0195	0.0092	0.0103
81	0.0196	0.0092	0.0104
82	0.0196	0.0092	0.0104
83	0.0197	0.0093	0.0104
84	0.0197	0.0093	0.0105
85	0.0198	0.0093	0.0105
86	0.0199	0.0093	0.0105
87	0.0200	0.0094	0.0106
88	0.0200	0.0094	0.0106
89	0.0201	0.0095	0.0107
90	0.0202	0.0095	0.0107
91	0.0203	0.0095	0.0107
92	0.0203	0.0095	0.0108
93	0.0204	0.0096	0.0108
94	0.0205	0.0096	0.0108
95	0.0206	0.0097	0.0109
96	0.0206	0.0097	0.0109
97	0.0207	0.0097	0.0110
98	0.0208	0.0098	0.0110
99	0.0209	0.0098	0.0111
100	0.0209	0.0098	0.0111
101	0.0210	0.0099	0.0111
102	0.0211	0.0099	0.0112
103	0.0212	0.0100	0.0112
104	0.0213	0.0100	0.0113
105	0.0214	0.0101	0.0113
106	0.0214	0.0101	0.0114
107	0.0216	0.0101	0.0114
108	0.0216	0.0102	0.0115
109	0.0218	0.0102	0.0115
110	0.0218	0.0103	0.0116
111	0.0219	0.0103	0.0116
112	0.0220	0.0104	0.0117
113	0.0221	0.0104	0.0117
114	0.0222	0.0104	0.0118
115	0.0224	0.0105	0.0118
116	0.0224	0.0105	0.0119
117	0.0226	0.0106	0.0120
118	0.0226	0.0106	0.0120
119	0.0228	0.0107	0.0121
120	0.0229	0.0108	0.0121
121	0.0230	0.0108	0.0122
122	0.0231	0.0109	0.0122
123	0.0233	0.0109	0.0123
124	0.0233	0.0110	0.0124
125	0.0235	0.0111	0.0125
126	0.0236	0.0111	0.0125
127	0.0238	0.0112	0.0126
128	0.0239	0.0112	0.0126
129	0.0240	0.0113	0.0127
130	0.0241	0.0114	0.0128
131	0.0243	0.0114	0.0129
132	0.0244	0.0115	0.0129
133	0.0246	0.0116	0.0130
134	0.0247	0.0116	0.0131
135	0.0249	0.0117	0.0132
136	0.0250	0.0118	0.0133
137	0.0253	0.0119	0.0134
138	0.0254	0.0119	0.0134
139	0.0256	0.0120	0.0136
140	0.0257	0.0121	0.0136
141	0.0259	0.0122	0.0137
142	0.0261	0.0123	0.0138
143	0.0263	0.0124	0.0139
144	0.0265	0.0124	0.0140
145	0.0261	0.0123	0.0138

146	0.0262	0.0123	0.0139
147	0.0265	0.0125	0.0140
148	0.0267	0.0125	0.0141
149	0.0270	0.0127	0.0143
150	0.0271	0.0128	0.0144
151	0.0275	0.0129	0.0145
152	0.0276	0.0130	0.0146
153	0.0280	0.0132	0.0148
154	0.0282	0.0132	0.0149
155	0.0285	0.0134	0.0151
156	0.0287	0.0135	0.0152
157	0.0291	0.0137	0.0154
158	0.0293	0.0138	0.0155
159	0.0298	0.0140	0.0158
160	0.0300	0.0141	0.0159
161	0.0305	0.0143	0.0161
162	0.0307	0.0145	0.0163
163	0.0313	0.0147	0.0166
164	0.0315	0.0148	0.0167
165	0.0321	0.0151	0.0170
166	0.0324	0.0152	0.0172
167	0.0330	0.0155	0.0175
168	0.0334	0.0157	0.0177
169	0.0341	0.0160	0.0181
170	0.0345	0.0162	0.0183
171	0.0353	0.0166	0.0187
172	0.0357	0.0168	0.0189
173	0.0366	0.0172	0.0194
174	0.0371	0.0174	0.0196
175	0.0381	0.0179	0.0202
176	0.0387	0.0182	0.0205
177	0.0399	0.0188	0.0211
178	0.0406	0.0191	0.0215
179	0.0420	0.0198	0.0223
180	0.0428	0.0202	0.0227
181	0.0447	0.0210	0.0236
182	0.0457	0.0215	0.0242
183	0.0480	0.0226	0.0254
184	0.0493	0.0232	0.0261
185	0.0257	0.0121	0.0136
186	0.0274	0.0129	0.0145
187	0.0318	0.0150	0.0169
188	0.0347	0.0163	0.0184
189	0.0432	0.0203	0.0229
190	0.0498	0.0234	0.0264
191	0.0755	0.0355	0.0400
192	0.1096	0.0444	0.0652
193	0.4741	0.0444	0.4297
194	0.0594	0.0279	0.0315
195	0.0384	0.0181	0.0203
196	0.0294	0.0138	0.0156
197	0.0508	0.0239	0.0269
198	0.0468	0.0220	0.0248
199	0.0437	0.0206	0.0232
200	0.0413	0.0194	0.0219
201	0.0393	0.0185	0.0208
202	0.0376	0.0177	0.0199
203	0.0361	0.0170	0.0191
204	0.0349	0.0164	0.0185
205	0.0337	0.0159	0.0179
206	0.0327	0.0154	0.0173
207	0.0318	0.0150	0.0168
208	0.0310	0.0146	0.0164
209	0.0302	0.0142	0.0160
210	0.0296	0.0139	0.0157
211	0.0289	0.0136	0.0153
212	0.0283	0.0133	0.0150
213	0.0278	0.0131	0.0147
214	0.0273	0.0128	0.0145
215	0.0268	0.0126	0.0142
216	0.0264	0.0124	0.0140

217	0.0266	0.0125	0.0141
218	0.0262	0.0123	0.0139
219	0.0258	0.0121	0.0137
220	0.0255	0.0120	0.0135
221	0.0251	0.0118	0.0133
222	0.0248	0.0117	0.0131
223	0.0245	0.0115	0.0130
224	0.0242	0.0114	0.0128
225	0.0239	0.0113	0.0127
226	0.0237	0.0111	0.0125
227	0.0234	0.0110	0.0124
228	0.0232	0.0109	0.0123
229	0.0229	0.0108	0.0122
230	0.0227	0.0107	0.0120
231	0.0225	0.0106	0.0119
232	0.0223	0.0105	0.0118
233	0.0221	0.0104	0.0117
234	0.0219	0.0103	0.0116
235	0.0217	0.0102	0.0115
236	0.0215	0.0101	0.0114
237	0.0213	0.0100	0.0113
238	0.0211	0.0099	0.0112
239	0.0210	0.0099	0.0111
240	0.0208	0.0098	0.0110
241	0.0207	0.0097	0.0109
242	0.0205	0.0096	0.0109
243	0.0204	0.0096	0.0108
244	0.0202	0.0095	0.0107
245	0.0201	0.0094	0.0106
246	0.0199	0.0094	0.0106
247	0.0198	0.0093	0.0105
248	0.0197	0.0092	0.0104
249	0.0195	0.0092	0.0103
250	0.0194	0.0091	0.0103
251	0.0193	0.0091	0.0102
252	0.0192	0.0090	0.0101
253	0.0190	0.0090	0.0101
254	0.0189	0.0089	0.0100
255	0.0188	0.0088	0.0100
256	0.0187	0.0088	0.0099
257	0.0186	0.0087	0.0098
258	0.0185	0.0087	0.0098
259	0.0184	0.0086	0.0097
260	0.0183	0.0086	0.0097
261	0.0182	0.0086	0.0096
262	0.0181	0.0085	0.0096
263	0.0180	0.0085	0.0095
264	0.0179	0.0084	0.0095
265	0.0178	0.0084	0.0094
266	0.0177	0.0083	0.0094
267	0.0176	0.0083	0.0093
268	0.0175	0.0083	0.0093
269	0.0175	0.0082	0.0093
270	0.0174	0.0082	0.0092
271	0.0173	0.0081	0.0092
272	0.0172	0.0081	0.0091
273	0.0171	0.0081	0.0091
274	0.0171	0.0080	0.0090
275	0.0170	0.0080	0.0090
276	0.0169	0.0080	0.0090
277	0.0168	0.0079	0.0089
278	0.0168	0.0079	0.0089
279	0.0167	0.0079	0.0088
280	0.0166	0.0078	0.0088
281	0.0166	0.0078	0.0088
282	0.0165	0.0078	0.0087
283	0.0164	0.0077	0.0087
284	0.0164	0.0077	0.0087
285	0.0163	0.0077	0.0086
286	0.0162	0.0076	0.0086
287	0.0162	0.0076	0.0086

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      288             0.0161          0.0076             0.0085
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.24(In)
      Total effective rainfall =      4.05(In)
      Peak flow rate in flood hydrograph =     40.60(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       12.5      25.0      37.5      50.0
----------------------------------------------------------------------------
  0+ 5       0.0006      0.08  Q          |         |         |         |
  0+10       0.0040      0.49  Q          |         |         |         |
  0+15       0.0122      1.20  Q          |         |         |         |
  0+20       0.0223      1.46  VQ         |         |         |         |
  0+25       0.0334      1.62  VQ         |         |         |         |
  0+30       0.0453      1.72  VQ         |         |         |         |
  0+35       0.0576      1.78  VQ         |         |         |         |
  0+40       0.0701      1.83  VQ         |         |         |         |
  0+45       0.0828      1.85  VQ         |         |         |         |
  0+50       0.0957      1.86  VQ         |         |         |         |
  0+55       0.1085      1.87  VQ         |         |         |         |
  1+ 0       0.1215      1.88  VQ         |         |         |         |
  1+ 5       0.1345      1.89  VQ         |         |         |         |
  1+10       0.1475      1.90  VQ         |         |         |         |
  1+15       0.1606      1.90  |Q         |         |         |         |
  1+20       0.1737      1.90  |Q         |         |         |         |
  1+25       0.1869      1.91  |Q         |         |         |         |
  1+30       0.2000      1.91  |Q         |         |         |         |
  1+35       0.2132      1.91  |Q         |         |         |         |
  1+40       0.2264      1.92  |Q         |         |         |         |
  1+45       0.2397      1.92  |Q         |         |         |         |
  1+50       0.2529      1.93  |Q         |         |         |         |
  1+55       0.2662      1.93  |Q         |         |         |         |
  2+ 0       0.2796      1.93  |Q         |         |         |         |
  2+ 5       0.2929      1.94  |Q         |         |         |         |
  2+10       0.3063      1.94  |QV        |         |         |         |
  2+15       0.3197      1.95  |QV        |         |         |         |
  2+20       0.3331      1.95  |QV        |         |         |         |
  2+25       0.3466      1.96  |QV        |         |         |         |
  2+30       0.3601      1.96  |QV        |         |         |         |
  2+35       0.3737      1.96  |QV        |         |         |         |
  2+40       0.3872      1.97  |QV        |         |         |         |
  2+45       0.4008      1.97  |QV        |         |         |         |
  2+50       0.4144      1.98  |QV        |         |         |         |
  2+55       0.4281      1.98  |QV        |         |         |         |
  3+ 0       0.4418      1.99  |QV        |         |         |         |
  3+ 5       0.4555      1.99  |QV        |         |         |         |
  3+10       0.4692      2.00  |Q V       |         |         |         |
  3+15       0.4830      2.00  |Q V       |         |         |         |
  3+20       0.4968      2.01  |Q V       |         |         |         |
  3+25       0.5107      2.01  |Q V       |         |         |         |
  3+30       0.5245      2.02  |Q V       |         |         |         |
  3+35       0.5385      2.02  |Q V       |         |         |         |
  3+40       0.5524      2.02  |Q V       |         |         |         |
  3+45       0.5664      2.03  |Q V       |         |         |         |
  3+50       0.5804      2.03  |Q V       |         |         |         |
  3+55       0.5944      2.04  |Q V       |         |         |         |
  4+ 0       0.6085      2.04  |Q V       |         |         |         |
  4+ 5       0.6226      2.05  |Q  V      |         |         |         |
  4+10       0.6368      2.06  |Q  V      |         |         |         |
  4+15       0.6510      2.06  |Q  V      |         |         |         |
  4+20       0.6652      2.07  |Q  V      |         |         |         |
  4+25       0.6795      2.07  |Q  V      |         |         |         |
  4+30       0.6938      2.08  |Q  V      |         |         |         |
  4+35       0.7081      2.08  |Q  V      |         |         |         |
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 4+40       0.7225      2.09  |Q  V     |          |          |          |
 4+45       0.7369      2.09  |Q  V     |          |          |          |
 4+50       0.7514      2.10  |Q  V     |          |          |          |
 4+55       0.7658      2.10  |Q   V    |          |          |          |
 5+ 0       0.7804      2.11  |Q   V    |          |          |          |
 5+ 5       0.7949      2.12  |Q   V    |          |          |          |
 5+10       0.8095      2.12  |Q   V    |          |          |          |
 5+15       0.8242      2.13  |Q   V    |          |          |          |
 5+20       0.8389      2.13  |Q   V    |          |          |          |
 5+25       0.8536      2.14  |Q   V    |          |          |          |
 5+30       0.8684      2.14  |Q   V    |          |          |          |
 5+35       0.8832      2.15  |Q   V    |          |          |          |
 5+40       0.8980      2.16  |Q   V    |          |          |          |
 5+45       0.9129      2.16  |Q   V    |          |          |          |
 5+50       0.9279      2.17  |Q    V   |          |          |          |
 5+55       0.9429      2.18  |Q    V   |          |          |          |
 6+ 0       0.9579      2.18  |Q    V   |          |          |          |
 6+ 5       0.9730      2.19  |Q    V   |          |          |          |
 6+10       0.9881      2.20  |Q    V   |          |          |          |
 6+15       1.0033      2.20  |Q    V   |          |          |          |
 6+20       1.0185      2.21  |Q    V   |          |          |          |
 6+25       1.0337      2.22  |Q    V   |          |          |          |
 6+30       1.0490      2.22  |Q    V   |          |          |          |
 6+35       1.0644      2.23  |Q    V   |          |          |          |
 6+40       1.0798      2.24  |Q     V  |          |          |          |
 6+45       1.0953      2.24  |Q     V  |          |          |          |
 6+50       1.1108      2.25  |Q     V  |          |          |          |
 6+55       1.1263      2.26  |Q     V  |          |          |          |
 7+ 0       1.1419      2.27  |Q     V  |          |          |          |
 7+ 5       1.1576      2.27  |Q     V  |          |          |          |
 7+10       1.1733      2.28  |Q     V  |          |          |          |
 7+15       1.1890      2.29  |Q     V  |          |          |          |
 7+20       1.2049      2.30  |Q     V  |          |          |          |
 7+25       1.2207      2.30  |Q      V |          |          |          |
 7+30       1.2366      2.31  |Q      V |          |          |          |
 7+35       1.2526      2.32  |Q      V |          |          |          |
 7+40       1.2687      2.33  |Q      V |          |          |          |
 7+45       1.2848      2.34  |Q      V |          |          |          |
 7+50       1.3009      2.34  |Q      V |          |          |          |
 7+55       1.3171      2.35  |Q      V |          |          |          |
 8+ 0       1.3334      2.36  |Q      V |          |          |          |
 8+ 5       1.3497      2.37  |Q      V |          |          |          |
 8+10       1.3661      2.38  |Q      V |          |          |          |
 8+15       1.3826      2.39  |Q       V|          |          |          |
 8+20       1.3991      2.40  |Q       V|          |          |          |
 8+25       1.4157      2.41  |Q       V|          |          |          |
 8+30       1.4323      2.42  |Q       V|          |          |          |
 8+35       1.4490      2.43  |Q       V|          |          |          |
 8+40       1.4658      2.44  |Q       V|          |          |          |
 8+45       1.4826      2.45  |Q       V|          |          |          |
 8+50       1.4995      2.46  |Q       V|          |          |          |
 8+55       1.5165      2.47  |Q       V|          |          |          |
 9+ 0       1.5336      2.48  |Q        V          |          |          |
 9+ 5       1.5507      2.49  |Q        V          |          |          |
 9+10       1.5679      2.50  |Q        V          |          |          |
 9+15       1.5852      2.51  | Q       V          |          |          |
 9+20       1.6025      2.52  | Q       V          |          |          |
 9+25       1.6200      2.53  | Q       V          |          |          |
 9+30       1.6375      2.54  | Q       V          |          |          |
 9+35       1.6551      2.55  | Q       V          |          |          |
 9+40       1.6727      2.56  | Q       V          |          |          |
 9+45       1.6905      2.58  | Q       |V         |          |          |
 9+50       1.7083      2.59  | Q       |V         |          |          |
 9+55       1.7262      2.60  | Q       |V         |          |          |
10+ 0       1.7442      2.61  | Q       |V         |          |          |
10+ 5       1.7623      2.63  | Q       |V         |          |          |
10+10       1.7805      2.64  | Q       |V         |          |          |
10+15       1.7988      2.65  | Q       |V         |          |          |
10+20       1.8171      2.67  | Q       |V         |          |          |
10+25       1.8356      2.68  | Q       | V        |          |          |
10+30       1.8541      2.69  | Q       | V        |          |          |
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10+35      1.8728     2.71  | Q       | V       |         |         |
10+40      1.8916     2.72  | Q       | V       |         |         |
10+45      1.9104     2.74  | Q       | V       |         |         |
10+50      1.9294     2.75  | Q       | V       |         |         |
10+55      1.9485     2.77  | Q       | V       |         |         |
11+ 0      1.9676     2.79  | Q       | V       |         |         |
11+ 5      1.9869     2.80  | Q       |  V      |         |         |
11+10      2.0063     2.82  | Q       |  V      |         |         |
11+15      2.0259     2.84  | Q       |  V      |         |         |
11+20      2.0455     2.85  | Q       |  V      |         |         |
11+25      2.0653     2.87  | Q       |  V      |         |         |
11+30      2.0852     2.89  | Q       |  V      |         |         |
11+35      2.1052     2.91  | Q       |  V      |         |         |
11+40      2.1254     2.93  | Q       |  V      |         |         |
11+45      2.1457     2.95  | Q       |   V     |         |         |
11+50      2.1661     2.97  | Q       |   V     |         |         |
11+55      2.1867     2.99  | Q       |   V     |         |         |
12+ 0      2.2074     3.01  | Q       |   V     |         |         |
12+ 5      2.2282     3.03  | Q       |   V     |         |         |
12+10      2.2491     3.03  | Q       |   V     |         |         |
12+15      2.2700     3.03  | Q       |   V     |         |         |
12+20      2.2909     3.04  | Q       |    V    |         |         |
12+25      2.3120     3.06  | Q       |    V    |         |         |
12+30      2.3332     3.08  | Q       |    V    |         |         |
12+35      2.3546     3.11  | Q       |    V    |         |         |
12+40      2.3761     3.13  | Q       |    V    |         |         |
12+45      2.3979     3.16  | Q       |    V    |         |         |
12+50      2.4198     3.19  | Q       |    V    |         |         |
12+55      2.4420     3.22  | Q       |     V   |         |         |
13+ 0      2.4643     3.25  | Q       |     V   |         |         |
13+ 5      2.4869     3.28  | Q       |     V   |         |         |
13+10      2.5097     3.31  | Q       |     V   |         |         |
13+15      2.5328     3.35  | Q       |     V   |         |         |
13+20      2.5560     3.38  | Q       |     V   |         |         |
13+25      2.5796     3.42  | Q       |     V   |         |         |
13+30      2.6034     3.46  | Q       |      V  |         |         |
13+35      2.6275     3.50  | Q       |      V  |         |         |
13+40      2.6519     3.54  | Q       |      V  |         |         |
13+45      2.6766     3.59  | Q       |      V  |         |         |
13+50      2.7016     3.63  | Q       |      V  |         |         |
13+55      2.7269     3.68  | Q       |      V  |         |         |
14+ 0      2.7526     3.73  | Q       |       V |         |         |
14+ 5      2.7787     3.79  |  Q      |       V |         |         |
14+10      2.8051     3.84  |  Q      |       V |         |         |
14+15      2.8320     3.90  |  Q      |       V |         |         |
14+20      2.8593     3.97  |  Q      |       V |         |         |
14+25      2.8871     4.04  |  Q      |       V |         |         |
14+30      2.9154     4.10  |  Q      |        V|         |         |
14+35      2.9442     4.18  |  Q      |        V|         |         |
14+40      2.9736     4.26  |  Q      |        V|         |         |
14+45      3.0035     4.35  |  Q      |        V|         |         |
14+50      3.0342     4.44  |  Q      |        V|         |         |
14+55      3.0655     4.55  |  Q      |         V         |         |
15+ 0      3.0976     4.66  |  Q      |         V         |         |
15+ 5      3.1306     4.79  |  Q      |         V         |         |
15+10      3.1644     4.92  |  Q      |         V         |         |
15+15      3.1994     5.07  |   Q     |         |V        |         |
15+20      3.2354     5.24  |   Q     |         |V        |         |
15+25      3.2719     5.30  |   Q     |         |V        |         |
15+30      3.3052     4.83  |  Q      |         |V        |         |
15+35      3.3322     3.93  |  Q      |         |V        |         |
15+40      3.3583     3.78  |  Q      |         | V       |         |
15+45      3.3853     3.92  |  Q      |         | V       |         |
15+50      3.4146     4.26  |  Q      |         | V       |         |
15+55      3.4486     4.94  |  Q      |         | V       |         |
16+ 0      3.4919     6.28  |    Q    |         | V       |         |
16+ 5      3.5772    12.39  |       Q |         |  V      |         |
16+10      3.7752    28.74  |         |         | Q V     |         |
16+15      4.0548    40.60  |         |         |     V   | Q       |
16+20      4.1861    19.07  |         |    Q    |      V  |         |
16+25      4.2730    12.61  |        Q|         |       V |         |
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16+30       4.3401      9.76  |       Q  |          |        V |          |
16+35       4.3987      8.50  |      Q   |          |        V |          |
16+40       4.4475      7.10  |     Q    |          |         V|          |
16+45       4.4879      5.86  |    Q     |          |         V|          |
16+50       4.5247      5.35  |    Q     |          |         V|          |
16+55       4.5592      5.01  |    Q     |          |         V|          |
17+ 0       4.5925      4.83  |   Q      |          |          V          |
17+ 5       4.6237      4.52  |   Q      |          |          V          |
17+10       4.6530      4.26  |   Q      |          |          V          |
17+15       4.6805      4.00  |   Q      |          |          V          |
17+20       4.7072      3.87  |   Q      |          |          V          |
17+25       4.7331      3.76  |   Q      |          |          |V         |
17+30       4.7583      3.66  | Q        |          |          |V         |
17+35       4.7829      3.57  | Q        |          |          |V         |
17+40       4.8069      3.48  | Q        |          |          |V         |
17+45       4.8303      3.40  | Q        |          |          |V         |
17+50       4.8532      3.33  | Q        |          |          |V         |
17+55       4.8757      3.26  | Q        |          |          | V        |
18+ 0       4.8977      3.20  | Q        |          |          | V        |
18+ 5       4.9194      3.14  | Q        |          |          | V        |
18+10       4.9408      3.11  | Q        |          |          | V        |
18+15       4.9620      3.08  | Q        |          |          | V        |
18+20       4.9830      3.05  | Q        |          |          | V        |
18+25       5.0037      3.01  | Q        |          |          | V        |
18+30       5.0242      2.97  | Q        |          |          |  V       |
18+35       5.0443      2.93  | Q        |          |          |  V       |
18+40       5.0643      2.89  | Q        |          |          |  V       |
18+45       5.0840      2.86  | Q        |          |          |  V       |
18+50       5.1034      2.82  | Q        |          |          |  V       |
18+55       5.1226      2.79  | Q        |          |          |  V       |
19+ 0       5.1416      2.76  | Q        |          |          |  V       |
19+ 5       5.1604      2.73  | Q        |          |          |  V       |
19+10       5.1790      2.70  | Q        |          |          |   V      |
19+15       5.1974      2.67  | Q        |          |          |   V      |
19+20       5.2156      2.64  | Q        |          |          |   V      |
19+25       5.2337      2.62  | Q        |          |          |   V      |
19+30       5.2515      2.59  | Q        |          |          |   V      |
19+35       5.2692      2.57  | Q        |          |          |   V      |
19+40       5.2868      2.55  | Q        |          |          |   V      |
19+45       5.3041      2.52  | Q        |          |          |   V      |
19+50       5.3214      2.50  | Q        |          |          |   V      |
19+55       5.3384      2.48  |Q         |          |          |    V     |
20+ 0       5.3554      2.46  |Q         |          |          |    V     |
20+ 5       5.3722      2.44  |Q         |          |          |    V     |
20+10       5.3889      2.42  |Q         |          |          |    V     |
20+15       5.4054      2.40  |Q         |          |          |    V     |
20+20       5.4218      2.38  |Q         |          |          |    V     |
20+25       5.4381      2.37  |Q         |          |          |    V     |
20+30       5.4543      2.35  |Q         |          |          |    V     |
20+35       5.4703      2.33  |Q         |          |          |    V     |
20+40       5.4863      2.31  |Q         |          |          |     V    |
20+45       5.5021      2.30  |Q         |          |          |     V    |
20+50       5.5178      2.28  |Q         |          |          |     V    |
20+55       5.5334      2.27  |Q         |          |          |     V    |
21+ 0       5.5489      2.25  |Q         |          |          |     V    |
21+ 5       5.5644      2.24  |Q         |          |          |     V    |
21+10       5.5797      2.22  |Q         |          |          |     V    |
21+15       5.5949      2.21  |Q         |          |          |     V    |
21+20       5.6101      2.20  |Q         |          |          |     V    |
21+25       5.6251      2.18  |Q         |          |          |     V    |
21+30       5.6401      2.17  |Q         |          |          |      V   |
21+35       5.6549      2.16  |Q         |          |          |      V   |
21+40       5.6697      2.15  |Q         |          |          |      V   |
21+45       5.6844      2.13  |Q         |          |          |      V   |
21+50       5.6990      2.12  |Q         |          |          |      V   |
21+55       5.7136      2.11  |Q         |          |          |      V   |
22+ 0       5.7280      2.10  |Q         |          |          |      V   |
22+ 5       5.7424      2.09  |Q         |          |          |      V   |
22+10       5.7567      2.08  |Q         |          |          |      V   |
22+15       5.7710      2.07  |Q         |          |          |      V   |
22+20       5.7851      2.06  |Q         |          |          |       V  |
```

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   22+25       5.7992      2.05  |Q        |         |         |       V |
   22+30       5.8132      2.04  |Q        |         |         |       V |
   22+35       5.8272      2.03  |Q        |         |         |       V |
   22+40       5.8411      2.02  |Q        |         |         |       V |
   22+45       5.8549      2.01  |Q        |         |         |       V |
   22+50       5.8687      2.00  |Q        |         |         |       V |
   22+55       5.8824      1.99  |Q        |         |         |       V |
   23+ 0       5.8960      1.98  |Q        |         |         |       V |
   23+ 5       5.9096      1.97  |Q        |         |         |       V |
   23+10       5.9231      1.96  |Q        |         |         |       V |
   23+15       5.9365      1.95  |Q        |         |         |        V|
   23+20       5.9499      1.94  |Q        |         |         |        V|
   23+25       5.9632      1.94  |Q        |         |         |        V|
   23+30       5.9765      1.93  |Q        |         |         |        V|
   23+35       5.9897      1.92  |Q        |         |         |        V|
   23+40       6.0029      1.91  |Q        |         |         |        V|
   23+45       6.0160      1.90  |Q        |         |         |        V|
   23+50       6.0291      1.90  |Q        |         |         |        V|
   23+55       6.0421      1.89  |Q        |         |         |        V|
   24+ 0       6.0551      1.88  |Q        |         |         |        V|
   24+ 5       6.0674      1.79  |Q        |         |         |        V|
   24+10       6.0768      1.37  |Q        |         |         |        V|
   24+15       6.0814      0.67  Q         |         |         |        V|
   24+20       6.0842      0.40  Q         |         |         |        V|
   24+25       6.0859      0.25  Q         |         |         |        V|
   24+30       6.0869      0.15  Q         |         |         |        V|
   24+35       6.0875      0.09  Q         |         |         |        V|
   24+40       6.0879      0.05  Q         |         |         |        V|
   24+45       6.0881      0.03  Q         |         |         |        V|
   24+50       6.0882      0.02  Q         |         |         |        V|
   24+55       6.0883      0.01  Q         |         |         |        V|
   25+ 0       6.0883      0.01  Q         |         |         |        V|
   25+ 5       6.0884      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'A' – 25 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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                Study date  11/14/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
25 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            18.06            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            18.06            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            18.06           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            18.06            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            18.06            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            18.06           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 70.0      70.0         18.06      1.000     0.532    1.000    0.532

Area-averaged adjusted loss rate Fm (In/Hr) =  0.532

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
18.06	1.000	70.0	70.0	4.29	0.598

Area-averaged catchment yield fraction, Y = 0.598
Area-averaged low loss fraction, Yb = 0.402
User entry of time of concentration = 0.202 (hours)
++
Watershed area = 18.06(Ac.)
Catchment Lag time = 0.162 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 51.5677
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.532(In/Hr)
Average low loss rate fraction (Yb) = 0.402 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 18.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.568(In)
30-minute factor = 0.999 Adjusted rainfall = 0.973(In)
1-hour factor = 0.999 Adjusted rainfall = 1.198(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 218.41 (CFS))	
1	4.472	9.767
2	26.592	48.314
3	64.398	82.572
4	78.587	30.990
5	86.751	17.831
6	92.030	11.532
7	95.442	7.452
8	97.482	4.455
9	98.356	1.909
10	98.889	1.165
11	99.255	0.797
12	99.630	0.821
13	99.870	0.524
14	100.000	0.283

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5684	0.5684
2	0.6998	0.1314
3	0.7904	0.0905
4	0.8616	0.0712
5	0.9212	0.0597
6	0.9730	0.0518
7	1.0191	0.0461
8	1.0608	0.0417
9	1.0989	0.0382
10	1.1342	0.0353
11	1.1671	0.0329
12	1.1980	0.0309

13	1.2586	0.0606
14	1.3174	0.0588
15	1.3746	0.0572
16	1.4304	0.0558
17	1.4849	0.0545
18	1.5381	0.0533
19	1.5903	0.0521
20	1.6414	0.0511
21	1.6915	0.0501
22	1.7407	0.0492
23	1.7891	0.0484
24	1.8366	0.0476
25	1.8834	0.0468
26	1.9295	0.0461
27	1.9749	0.0454
28	2.0197	0.0448
29	2.0639	0.0442
30	2.1075	0.0436
31	2.1505	0.0430
32	2.1930	0.0425
33	2.2350	0.0420
34	2.2765	0.0415
35	2.3176	0.0410
36	2.3582	0.0406
37	2.3983	0.0401
38	2.4380	0.0397
39	2.4773	0.0393
40	2.5163	0.0389
41	2.5548	0.0386
42	2.5930	0.0382
43	2.6309	0.0379
44	2.6684	0.0375
45	2.7056	0.0372
46	2.7425	0.0369
47	2.7790	0.0366
48	2.8153	0.0363
49	2.8513	0.0360
50	2.8870	0.0357
51	2.9224	0.0354
52	2.9575	0.0352
53	2.9924	0.0349
54	3.0271	0.0346
55	3.0615	0.0344
56	3.0957	0.0342
57	3.1296	0.0339
58	3.1633	0.0337
59	3.1968	0.0335
60	3.2300	0.0333
61	3.2631	0.0330
62	3.2959	0.0328
63	3.3286	0.0326
64	3.3610	0.0324
65	3.3933	0.0322
66	3.4253	0.0321
67	3.4572	0.0319
68	3.4889	0.0317
69	3.5204	0.0315
70	3.5517	0.0313
71	3.5829	0.0312
72	3.6139	0.0310
73	3.6475	0.0336
74	3.6810	0.0335
75	3.7143	0.0333
76	3.7474	0.0332
77	3.7805	0.0330
78	3.8134	0.0329
79	3.8461	0.0327
80	3.8787	0.0326
81	3.9112	0.0325
82	3.9436	0.0323
83	3.9758	0.0322

84	4.0079	0.0321
85	4.0398	0.0320
86	4.0717	0.0318
87	4.1034	0.0317
88	4.1350	0.0316
89	4.1665	0.0315
90	4.1979	0.0314
91	4.2291	0.0313
92	4.2602	0.0311
93	4.2913	0.0310
94	4.3222	0.0309
95	4.3530	0.0308
96	4.3837	0.0307
97	4.4143	0.0306
98	4.4448	0.0305
99	4.4752	0.0304
100	4.5055	0.0303
101	4.5357	0.0302
102	4.5658	0.0301
103	4.5958	0.0300
104	4.6257	0.0299
105	4.6555	0.0298
106	4.6852	0.0297
107	4.7149	0.0296
108	4.7444	0.0295
109	4.7738	0.0294
110	4.8032	0.0294
111	4.8325	0.0293
112	4.8616	0.0292
113	4.8907	0.0291
114	4.9197	0.0290
115	4.9487	0.0289
116	4.9775	0.0288
117	5.0063	0.0288
118	5.0350	0.0287
119	5.0636	0.0286
120	5.0921	0.0285
121	5.1205	0.0284
122	5.1489	0.0284
123	5.1772	0.0283
124	5.2054	0.0282
125	5.2336	0.0281
126	5.2616	0.0281
127	5.2896	0.0280
128	5.3176	0.0279
129	5.3454	0.0279
130	5.3732	0.0278
131	5.4009	0.0277
132	5.4285	0.0276
133	5.4561	0.0276
134	5.4836	0.0275
135	5.5110	0.0274
136	5.5384	0.0274
137	5.5657	0.0273
138	5.5930	0.0272
139	5.6201	0.0272
140	5.6472	0.0271
141	5.6743	0.0270
142	5.7013	0.0270
143	5.7282	0.0269
144	5.7551	0.0269
145	5.7819	0.0268
146	5.8086	0.0267
147	5.8353	0.0267
148	5.8619	0.0266
149	5.8884	0.0266
150	5.9149	0.0265
151	5.9414	0.0264
152	5.9678	0.0264
153	5.9941	0.0263
154	6.0204	0.0263

155	6.0466	0.0262
156	6.0727	0.0262
157	6.0988	0.0261
158	6.1249	0.0260
159	6.1509	0.0260
160	6.1768	0.0259
161	6.2027	0.0259
162	6.2286	0.0258
163	6.2543	0.0258
164	6.2801	0.0257
165	6.3057	0.0257
166	6.3314	0.0256
167	6.3570	0.0256
168	6.3825	0.0255
169	6.4080	0.0255
170	6.4334	0.0254
171	6.4588	0.0254
172	6.4841	0.0253
173	6.5094	0.0253
174	6.5346	0.0252
175	6.5598	0.0252
176	6.5849	0.0251
177	6.6100	0.0251
178	6.6351	0.0250
179	6.6601	0.0250
180	6.6850	0.0250
181	6.7099	0.0249
182	6.7348	0.0249
183	6.7596	0.0248
184	6.7844	0.0248
185	6.8091	0.0247
186	6.8338	0.0247
187	6.8584	0.0246
188	6.8830	0.0246
189	6.9076	0.0246
190	6.9321	0.0245
191	6.9566	0.0245
192	6.9810	0.0244
193	7.0054	0.0244
194	7.0297	0.0243
195	7.0541	0.0243
196	7.0783	0.0243
197	7.1025	0.0242
198	7.1267	0.0242
199	7.1509	0.0241
200	7.1750	0.0241
201	7.1990	0.0241
202	7.2230	0.0240
203	7.2470	0.0240
204	7.2710	0.0239
205	7.2949	0.0239
206	7.3188	0.0239
207	7.3426	0.0238
208	7.3664	0.0238
209	7.3901	0.0238
210	7.4138	0.0237
211	7.4375	0.0237
212	7.4612	0.0236
213	7.4848	0.0236
214	7.5083	0.0236
215	7.5319	0.0235
216	7.5554	0.0235
217	7.5788	0.0235
218	7.6023	0.0234
219	7.6257	0.0234
220	7.6490	0.0234
221	7.6723	0.0233
222	7.6956	0.0233
223	7.7189	0.0233
224	7.7421	0.0232
225	7.7653	0.0232

226	7.7884	0.0232
227	7.8116	0.0231
228	7.8346	0.0231
229	7.8577	0.0231
230	7.8807	0.0230
231	7.9037	0.0230
232	7.9266	0.0230
233	7.9496	0.0229
234	7.9724	0.0229
235	7.9953	0.0229
236	8.0181	0.0228
237	8.0409	0.0228
238	8.0637	0.0228
239	8.0864	0.0227
240	8.1091	0.0227
241	8.1318	0.0227
242	8.1544	0.0226
243	8.1770	0.0226
244	8.1996	0.0226
245	8.2221	0.0225
246	8.2446	0.0225
247	8.2671	0.0225
248	8.2896	0.0225
249	8.3120	0.0224
250	8.3344	0.0224
251	8.3567	0.0224
252	8.3791	0.0223
253	8.4014	0.0223
254	8.4237	0.0223
255	8.4459	0.0222
256	8.4681	0.0222
257	8.4903	0.0222
258	8.5125	0.0222
259	8.5346	0.0221
260	8.5567	0.0221
261	8.5788	0.0221
262	8.6009	0.0221
263	8.6229	0.0220
264	8.6449	0.0220
265	8.6668	0.0220
266	8.6888	0.0219
267	8.7107	0.0219
268	8.7326	0.0219
269	8.7544	0.0219
270	8.7763	0.0218
271	8.7981	0.0218
272	8.8199	0.0218
273	8.8416	0.0218
274	8.8633	0.0217
275	8.8850	0.0217
276	8.9067	0.0217
277	8.9284	0.0216
278	8.9500	0.0216
279	8.9716	0.0216
280	8.9932	0.0216
281	9.0147	0.0215
282	9.0362	0.0215
283	9.0577	0.0215
284	9.0792	0.0215
285	9.1007	0.0214
286	9.1221	0.0214
287	9.1435	0.0214
288	9.1649	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0086	0.0128
2	0.0214	0.0086	0.0128
3	0.0214	0.0086	0.0128

4	0.0215	0.0086	0.0128
5	0.0215	0.0087	0.0129
6	0.0215	0.0087	0.0129
7	0.0216	0.0087	0.0129
8	0.0216	0.0087	0.0129
9	0.0217	0.0087	0.0130
10	0.0217	0.0087	0.0130
11	0.0218	0.0087	0.0130
12	0.0218	0.0088	0.0130
13	0.0218	0.0088	0.0131
14	0.0219	0.0088	0.0131
15	0.0219	0.0088	0.0131
16	0.0219	0.0088	0.0131
17	0.0220	0.0088	0.0132
18	0.0220	0.0089	0.0132
19	0.0221	0.0089	0.0132
20	0.0221	0.0089	0.0132
21	0.0222	0.0089	0.0133
22	0.0222	0.0089	0.0133
23	0.0222	0.0089	0.0133
24	0.0223	0.0090	0.0133
25	0.0223	0.0090	0.0134
26	0.0224	0.0090	0.0134
27	0.0224	0.0090	0.0134
28	0.0225	0.0090	0.0134
29	0.0225	0.0091	0.0135
30	0.0225	0.0091	0.0135
31	0.0226	0.0091	0.0135
32	0.0226	0.0091	0.0135
33	0.0227	0.0091	0.0136
34	0.0227	0.0091	0.0136
35	0.0228	0.0092	0.0136
36	0.0228	0.0092	0.0136
37	0.0229	0.0092	0.0137
38	0.0229	0.0092	0.0137
39	0.0230	0.0092	0.0137
40	0.0230	0.0093	0.0138
41	0.0231	0.0093	0.0138
42	0.0231	0.0093	0.0138
43	0.0232	0.0093	0.0139
44	0.0232	0.0093	0.0139
45	0.0233	0.0094	0.0139
46	0.0233	0.0094	0.0139
47	0.0234	0.0094	0.0140
48	0.0234	0.0094	0.0140
49	0.0235	0.0094	0.0141
50	0.0235	0.0095	0.0141
51	0.0236	0.0095	0.0141
52	0.0236	0.0095	0.0141
53	0.0237	0.0095	0.0142
54	0.0238	0.0095	0.0142
55	0.0238	0.0096	0.0143
56	0.0239	0.0096	0.0143
57	0.0239	0.0096	0.0143
58	0.0240	0.0096	0.0143
59	0.0241	0.0097	0.0144
60	0.0241	0.0097	0.0144
61	0.0242	0.0097	0.0145
62	0.0242	0.0097	0.0145
63	0.0243	0.0098	0.0145
64	0.0243	0.0098	0.0146
65	0.0244	0.0098	0.0146
66	0.0245	0.0098	0.0146
67	0.0246	0.0099	0.0147
68	0.0246	0.0099	0.0147
69	0.0247	0.0099	0.0148
70	0.0247	0.0099	0.0148
71	0.0248	0.0100	0.0148
72	0.0249	0.0100	0.0149
73	0.0250	0.0100	0.0149
74	0.0250	0.0100	0.0149

75	0.0251	0.0101	0.0150
76	0.0251	0.0101	0.0150
77	0.0252	0.0101	0.0151
78	0.0253	0.0102	0.0151
79	0.0254	0.0102	0.0152
80	0.0254	0.0102	0.0152
81	0.0255	0.0103	0.0153
82	0.0256	0.0103	0.0153
83	0.0257	0.0103	0.0154
84	0.0257	0.0103	0.0154
85	0.0258	0.0104	0.0154
86	0.0259	0.0104	0.0155
87	0.0260	0.0105	0.0155
88	0.0260	0.0105	0.0156
89	0.0262	0.0105	0.0156
90	0.0262	0.0105	0.0157
91	0.0263	0.0106	0.0157
92	0.0264	0.0106	0.0158
93	0.0265	0.0107	0.0158
94	0.0266	0.0107	0.0159
95	0.0267	0.0107	0.0160
96	0.0267	0.0107	0.0160
97	0.0269	0.0108	0.0161
98	0.0269	0.0108	0.0161
99	0.0270	0.0109	0.0162
100	0.0271	0.0109	0.0162
101	0.0272	0.0110	0.0163
102	0.0273	0.0110	0.0163
103	0.0274	0.0110	0.0164
104	0.0275	0.0111	0.0164
105	0.0276	0.0111	0.0165
106	0.0277	0.0111	0.0166
107	0.0279	0.0112	0.0167
108	0.0279	0.0112	0.0167
109	0.0281	0.0113	0.0168
110	0.0281	0.0113	0.0168
111	0.0283	0.0114	0.0169
112	0.0284	0.0114	0.0170
113	0.0285	0.0115	0.0171
114	0.0286	0.0115	0.0171
115	0.0288	0.0116	0.0172
116	0.0288	0.0116	0.0172
117	0.0290	0.0117	0.0173
118	0.0291	0.0117	0.0174
119	0.0293	0.0118	0.0175
120	0.0294	0.0118	0.0176
121	0.0295	0.0119	0.0177
122	0.0296	0.0119	0.0177
123	0.0298	0.0120	0.0178
124	0.0299	0.0120	0.0179
125	0.0301	0.0121	0.0180
126	0.0302	0.0121	0.0181
127	0.0304	0.0122	0.0182
128	0.0305	0.0123	0.0182
129	0.0307	0.0123	0.0184
130	0.0308	0.0124	0.0184
131	0.0310	0.0125	0.0186
132	0.0311	0.0125	0.0186
133	0.0314	0.0126	0.0188
134	0.0315	0.0127	0.0188
135	0.0317	0.0128	0.0190
136	0.0318	0.0128	0.0190
137	0.0321	0.0129	0.0192
138	0.0322	0.0130	0.0193
139	0.0325	0.0131	0.0194
140	0.0326	0.0131	0.0195
141	0.0329	0.0132	0.0197
142	0.0330	0.0133	0.0198
143	0.0333	0.0134	0.0199
144	0.0335	0.0135	0.0200
145	0.0310	0.0125	0.0185

146	0.0312	0.0125	0.0186
147	0.0315	0.0127	0.0188
148	0.0317	0.0127	0.0189
149	0.0321	0.0129	0.0192
150	0.0322	0.0130	0.0193
151	0.0326	0.0131	0.0195
152	0.0328	0.0132	0.0196
153	0.0333	0.0134	0.0199
154	0.0335	0.0135	0.0200
155	0.0339	0.0136	0.0203
156	0.0342	0.0137	0.0204
157	0.0346	0.0139	0.0207
158	0.0349	0.0140	0.0209
159	0.0354	0.0142	0.0212
160	0.0357	0.0144	0.0213
161	0.0363	0.0146	0.0217
162	0.0366	0.0147	0.0219
163	0.0372	0.0150	0.0222
164	0.0375	0.0151	0.0224
165	0.0382	0.0154	0.0228
166	0.0386	0.0155	0.0231
167	0.0393	0.0158	0.0235
168	0.0397	0.0160	0.0237
169	0.0406	0.0163	0.0243
170	0.0410	0.0165	0.0245
171	0.0420	0.0169	0.0251
172	0.0425	0.0171	0.0254
173	0.0436	0.0175	0.0261
174	0.0442	0.0178	0.0264
175	0.0454	0.0183	0.0272
176	0.0461	0.0185	0.0276
177	0.0476	0.0191	0.0284
178	0.0484	0.0194	0.0289
179	0.0501	0.0201	0.0300
180	0.0511	0.0205	0.0306
181	0.0533	0.0214	0.0318
182	0.0545	0.0219	0.0326
183	0.0572	0.0230	0.0342
184	0.0588	0.0237	0.0352
185	0.0309	0.0124	0.0185
186	0.0329	0.0132	0.0197
187	0.0382	0.0153	0.0228
188	0.0417	0.0167	0.0249
189	0.0518	0.0208	0.0310
190	0.0597	0.0240	0.0357
191	0.0905	0.0364	0.0541
192	0.1314	0.0444	0.0870
193	0.5684	0.0444	0.5241
194	0.0712	0.0286	0.0426
195	0.0461	0.0185	0.0275
196	0.0353	0.0142	0.0211
197	0.0606	0.0244	0.0362
198	0.0558	0.0224	0.0334
199	0.0521	0.0210	0.0312
200	0.0492	0.0198	0.0294
201	0.0468	0.0188	0.0280
202	0.0448	0.0180	0.0268
203	0.0430	0.0173	0.0257
204	0.0415	0.0167	0.0248
205	0.0401	0.0161	0.0240
206	0.0389	0.0157	0.0233
207	0.0379	0.0152	0.0226
208	0.0369	0.0148	0.0220
209	0.0360	0.0145	0.0215
210	0.0352	0.0141	0.0210
211	0.0344	0.0138	0.0206
212	0.0337	0.0135	0.0202
213	0.0330	0.0133	0.0198
214	0.0324	0.0130	0.0194
215	0.0319	0.0128	0.0191
216	0.0313	0.0126	0.0187

217	0.0336	0.0135	0.0201
218	0.0332	0.0133	0.0198
219	0.0327	0.0132	0.0196
220	0.0323	0.0130	0.0193
221	0.0320	0.0129	0.0191
222	0.0316	0.0127	0.0189
223	0.0313	0.0126	0.0187
224	0.0309	0.0124	0.0185
225	0.0306	0.0123	0.0183
226	0.0303	0.0122	0.0181
227	0.0300	0.0121	0.0179
228	0.0297	0.0119	0.0178
229	0.0294	0.0118	0.0176
230	0.0292	0.0117	0.0175
231	0.0289	0.0116	0.0173
232	0.0287	0.0115	0.0172
233	0.0284	0.0114	0.0170
234	0.0282	0.0113	0.0169
235	0.0280	0.0113	0.0167
236	0.0278	0.0112	0.0166
237	0.0276	0.0111	0.0165
238	0.0274	0.0110	0.0164
239	0.0272	0.0109	0.0162
240	0.0270	0.0108	0.0161
241	0.0268	0.0108	0.0160
242	0.0266	0.0107	0.0159
243	0.0264	0.0106	0.0158
244	0.0263	0.0106	0.0157
245	0.0261	0.0105	0.0156
246	0.0259	0.0104	0.0155
247	0.0258	0.0104	0.0154
248	0.0256	0.0103	0.0153
249	0.0255	0.0102	0.0152
250	0.0253	0.0102	0.0151
251	0.0252	0.0101	0.0151
252	0.0250	0.0101	0.0150
253	0.0249	0.0100	0.0149
254	0.0248	0.0100	0.0148
255	0.0246	0.0099	0.0147
256	0.0245	0.0099	0.0147
257	0.0244	0.0098	0.0146
258	0.0243	0.0098	0.0145
259	0.0241	0.0097	0.0144
260	0.0240	0.0097	0.0144
261	0.0239	0.0096	0.0143
262	0.0238	0.0096	0.0142
263	0.0237	0.0095	0.0142
264	0.0236	0.0095	0.0141
265	0.0235	0.0094	0.0140
266	0.0234	0.0094	0.0140
267	0.0233	0.0093	0.0139
268	0.0232	0.0093	0.0138
269	0.0231	0.0093	0.0138
270	0.0230	0.0092	0.0137
271	0.0229	0.0092	0.0137
272	0.0228	0.0091	0.0136
273	0.0227	0.0091	0.0136
274	0.0226	0.0091	0.0135
275	0.0225	0.0090	0.0134
276	0.0224	0.0090	0.0134
277	0.0223	0.0090	0.0133
278	0.0222	0.0089	0.0133
279	0.0221	0.0089	0.0132
280	0.0221	0.0089	0.0132
281	0.0220	0.0088	0.0131
282	0.0219	0.0088	0.0131
283	0.0218	0.0088	0.0130
284	0.0217	0.0087	0.0130
285	0.0216	0.0087	0.0129
286	0.0216	0.0087	0.0129
287	0.0215	0.0086	0.0129

```
      288             0.0214          0.0086             0.0128
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.49(In)
      Total effective rainfall =      5.67(In)
      Peak flow rate in flood hydrograph =     50.15(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       15.0      30.0      45.0      60.0
----------------------------------------------------------------------------
  0+ 5       0.0009      0.12  Q         |         |         |         |
  0+10       0.0060      0.74  Q         |         |         |         |
  0+15       0.0184      1.80  VQ        |         |         |         |
  0+20       0.0335      2.20  VQ        |         |         |         |
  0+25       0.0502      2.43  VQ        |         |         |         |
  0+30       0.0680      2.58  VQ        |         |         |         |
  0+35       0.0865      2.68  VQ        |         |         |         |
  0+40       0.1054      2.74  VQ        |         |         |         |
  0+45       0.1244      2.77  VQ        |         |         |         |
  0+50       0.1437      2.79  VQ        |         |         |         |
  0+55       0.1630      2.81  VQ        |         |         |         |
  1+ 0       0.1824      2.82  VQ        |         |         |         |
  1+ 5       0.2020      2.83  VQ        |         |         |         |
  1+10       0.2215      2.84  |Q        |         |         |         |
  1+15       0.2411      2.85  |Q        |         |         |         |
  1+20       0.2608      2.85  |Q        |         |         |         |
  1+25       0.2805      2.86  |Q        |         |         |         |
  1+30       0.3002      2.86  |Q        |         |         |         |
  1+35       0.3200      2.87  |Q        |         |         |         |
  1+40       0.3398      2.87  |Q        |         |         |         |
  1+45       0.3596      2.88  |Q        |         |         |         |
  1+50       0.3795      2.88  |Q        |         |         |         |
  1+55       0.3994      2.89  |Q        |         |         |         |
  2+ 0       0.4193      2.90  |Q        |         |         |         |
  2+ 5       0.4393      2.90  |QV       |         |         |         |
  2+10       0.4593      2.91  |QV       |         |         |         |
  2+15       0.4794      2.91  |QV       |         |         |         |
  2+20       0.4995      2.92  |QV       |         |         |         |
  2+25       0.5196      2.92  |QV       |         |         |         |
  2+30       0.5398      2.93  |QV       |         |         |         |
  2+35       0.5600      2.94  |QV       |         |         |         |
  2+40       0.5803      2.94  |QV       |         |         |         |
  2+45       0.6006      2.95  |QV       |         |         |         |
  2+50       0.6209      2.95  |QV       |         |         |         |
  2+55       0.6413      2.96  |Q V      |         |         |         |
  3+ 0       0.6617      2.97  |Q V      |         |         |         |
  3+ 5       0.6822      2.97  |Q V      |         |         |         |
  3+10       0.7027      2.98  |Q V      |         |         |         |
  3+15       0.7233      2.98  |Q V      |         |         |         |
  3+20       0.7439      2.99  |Q V      |         |         |         |
  3+25       0.7645      3.00  |Q V      |         |         |         |
  3+30       0.7852      3.00  | QV      |         |         |         |
  3+35       0.8059      3.01  | QV      |         |         |         |
  3+40       0.8267      3.02  | QV      |         |         |         |
  3+45       0.8475      3.02  | QV      |         |         |         |
  3+50       0.8684      3.03  | Q V     |         |         |         |
  3+55       0.8893      3.04  | Q V     |         |         |         |
  4+ 0       0.9103      3.04  | Q V     |         |         |         |
  4+ 5       0.9313      3.05  | Q V     |         |         |         |
  4+10       0.9523      3.06  | Q V     |         |         |         |
  4+15       0.9734      3.06  | Q V     |         |         |         |
  4+20       0.9946      3.07  | Q V     |         |         |         |
  4+25       1.0158      3.08  | Q V     |         |         |         |
  4+30       1.0370      3.09  | Q V     |         |         |         |
  4+35       1.0583      3.09  | Q V     |         |         |         |
```

```
 4+40       1.0797      3.10  | Q  V    |          |          |          |
 4+45       1.1011      3.11  | Q  V    |          |          |          |
 4+50       1.1225      3.11  | Q  V    |          |          |          |
 4+55       1.1440      3.12  | Q  V    |          |          |          |
 5+ 0       1.1656      3.13  | Q  V    |          |          |          |
 5+ 5       1.1872      3.14  | Q  V    |          |          |          |
 5+10       1.2088      3.14  | Q  V    |          |          |          |
 5+15       1.2306      3.15  | Q  V    |          |          |          |
 5+20       1.2523      3.16  | Q  V    |          |          |          |
 5+25       1.2741      3.17  | Q  V    |          |          |          |
 5+30       1.2960      3.18  | Q   V   |          |          |          |
 5+35       1.3180      3.18  | Q   V   |          |          |          |
 5+40       1.3399      3.19  | Q   V   |          |          |          |
 5+45       1.3620      3.20  | Q   V   |          |          |          |
 5+50       1.3841      3.21  | Q   V   |          |          |          |
 5+55       1.4063      3.22  | Q   V   |          |          |          |
 6+ 0       1.4285      3.23  | Q   V   |          |          |          |
 6+ 5       1.4508      3.24  | Q   V   |          |          |          |
 6+10       1.4731      3.24  | Q   V   |          |          |          |
 6+15       1.4955      3.25  | Q    V  |          |          |          |
 6+20       1.5180      3.26  | Q    V  |          |          |          |
 6+25       1.5405      3.27  | Q    V  |          |          |          |
 6+30       1.5631      3.28  | Q    V  |          |          |          |
 6+35       1.5857      3.29  | Q    V  |          |          |          |
 6+40       1.6084      3.30  | Q    V  |          |          |          |
 6+45       1.6312      3.31  | Q    V  |          |          |          |
 6+50       1.6541      3.32  | Q    V  |          |          |          |
 6+55       1.6770      3.33  | Q    V  |          |          |          |
 7+ 0       1.7000      3.34  | Q    V  |          |          |          |
 7+ 5       1.7230      3.35  | Q     V |          |          |          |
 7+10       1.7461      3.36  | Q     V |          |          |          |
 7+15       1.7693      3.37  | Q     V |          |          |          |
 7+20       1.7926      3.38  | Q     V |          |          |          |
 7+25       1.8159      3.39  | Q     V |          |          |          |
 7+30       1.8393      3.40  | Q     V |          |          |          |
 7+35       1.8628      3.41  | Q     V |          |          |          |
 7+40       1.8863      3.42  | Q     V |          |          |          |
 7+45       1.9100      3.43  | Q     V |          |          |          |
 7+50       1.9337      3.44  | Q      V|          |          |          |
 7+55       1.9575      3.45  | Q      V|          |          |          |
 8+ 0       1.9813      3.46  | Q      V|          |          |          |
 8+ 5       2.0052      3.48  | Q      V|          |          |          |
 8+10       2.0293      3.49  | Q      V|          |          |          |
 8+15       2.0534      3.50  | Q      V|          |          |          |
 8+20       2.0776      3.51  | Q      V|          |          |          |
 8+25       2.1018      3.52  | Q      V|          |          |          |
 8+30       2.1262      3.54  | Q      V|          |          |          |
 8+35       2.1506      3.55  | Q       V          |          |          |
 8+40       2.1751      3.56  | Q       V          |          |          |
 8+45       2.1998      3.57  | Q       V          |          |          |
 8+50       2.2245      3.59  | Q       V          |          |          |
 8+55       2.2493      3.60  | Q       V          |          |          |
 9+ 0       2.2741      3.61  | Q       V          |          |          |
 9+ 5       2.2991      3.63  | Q       V          |          |          |
 9+10       2.3242      3.64  | Q       V          |          |          |
 9+15       2.3494      3.66  | Q       |V         |          |          |
 9+20       2.3747      3.67  | Q       |V         |          |          |
 9+25       2.4000      3.68  | Q       |V         |          |          |
 9+30       2.4255      3.70  | Q       |V         |          |          |
 9+35       2.4511      3.71  | Q       |V         |          |          |
 9+40       2.4768      3.73  | Q       |V         |          |          |
 9+45       2.5026      3.75  | Q       |V         |          |          |
 9+50       2.5285      3.76  | Q       |V         |          |          |
 9+55       2.5545      3.78  | Q       |V         |          |          |
10+ 0       2.5806      3.79  | Q       | V        |          |          |
10+ 5       2.6069      3.81  | Q       | V        |          |          |
10+10       2.6332      3.83  | Q       | V        |          |          |
10+15       2.6597      3.85  | Q       | V        |          |          |
10+20       2.6863      3.86  | Q       | V        |          |          |
10+25       2.7130      3.88  | Q       | V        |          |          |
10+30       2.7399      3.90  | Q       | V        |          |          |
```

```
10+35      2.7669     3.92  | Q       | V       |         |         |
10+40      2.7940     3.94  | Q       |  V      |         |         |
10+45      2.8212     3.96  | Q       |  V      |         |         |
10+50      2.8486     3.98  | Q       |  V      |         |         |
10+55      2.8761     4.00  | Q       |  V      |         |         |
11+ 0      2.9038     4.02  | Q       |  V      |         |         |
11+ 5      2.9316     4.04  | Q       |  V      |         |         |
11+10      2.9595     4.06  | Q       |  V      |         |         |
11+15      2.9877     4.08  | Q       |   V     |         |         |
11+20      3.0159     4.10  | Q       |   V     |         |         |
11+25      3.0443     4.13  | Q       |   V     |         |         |
11+30      3.0729     4.15  | Q       |   V     |         |         |
11+35      3.1017     4.17  | Q       |   V     |         |         |
11+40      3.1306     4.20  | Q       |   V     |         |         |
11+45      3.1597     4.22  | Q       |   V     |         |         |
11+50      3.1889     4.25  | Q       |   V     |         |         |
11+55      3.2184     4.28  | Q       |    V    |         |         |
12+ 0      3.2480     4.30  | Q       |    V    |         |         |
12+ 5      3.2778     4.32  | Q       |    V    |         |         |
12+10      3.3071     4.26  | Q       |    V    |         |         |
12+15      3.3357     4.16  | Q       |    V    |         |         |
12+20      3.3642     4.14  | Q       |    V    |         |         |
12+25      3.3928     4.14  | Q       |    V    |         |         |
12+30      3.4214     4.15  | Q       |     V   |         |         |
12+35      3.4501     4.18  | Q       |     V   |         |         |
12+40      3.4791     4.21  | Q       |     V   |         |         |
12+45      3.5083     4.24  | Q       |     V   |         |         |
12+50      3.5378     4.28  | Q       |     V   |         |         |
12+55      3.5676     4.32  | Q       |     V   |         |         |
13+ 0      3.5976     4.36  | Q       |     V   |         |         |
13+ 5      3.6279     4.40  | Q       |      V  |         |         |
13+10      3.6585     4.44  | Q       |      V  |         |         |
13+15      3.6894     4.49  | Q       |      V  |         |         |
13+20      3.7207     4.54  |  Q      |      V  |         |         |
13+25      3.7523     4.59  |  Q      |      V  |         |         |
13+30      3.7843     4.64  |  Q      |      V  |         |         |
13+35      3.8167     4.70  |  Q      |      V  |         |         |
13+40      3.8494     4.75  |  Q      |       V |         |         |
13+45      3.8826     4.82  |  Q      |       V |         |         |
13+50      3.9162     4.88  |  Q      |       V |         |         |
13+55      3.9502     4.94  |  Q      |       V |         |         |
14+ 0      3.9848     5.01  |  Q      |       V |         |         |
14+ 5      4.0198     5.09  |  Q      |       V |         |         |
14+10      4.0553     5.16  |  Q      |        V|         |         |
14+15      4.0915     5.25  |  Q      |        V|         |         |
14+20      4.1282     5.33  |  Q      |        V|         |         |
14+25      4.1655     5.42  |  Q      |        V|         |         |
14+30      4.2035     5.52  |  Q      |        V|         |         |
14+35      4.2423     5.63  |  Q      |        V|         |         |
14+40      4.2818     5.73  |  Q      |         V         |         |
14+45      4.3221     5.86  |  Q      |         V         |         |
14+50      4.3633     5.98  |  Q      |         V         |         |
14+55      4.4054     6.12  |   Q     |         V         |         |
15+ 0      4.4486     6.27  |   Q     |         V         |         |
15+ 5      4.4930     6.44  |   Q     |         |V        |         |
15+10      4.5386     6.62  |   Q     |         |V        |         |
15+15      4.5856     6.83  |   Q     |         |V        |         |
15+20      4.6342     7.05  |   Q     |         |V        |         |
15+25      4.6834     7.14  |   Q     |         |V        |         |
15+30      4.7282     6.51  |   Q     |         | V       |         |
15+35      4.7648     5.31  |  Q      |         | V       |         |
15+40      4.8000     5.11  |  Q      |         | V       |         |
15+45      4.8365     5.30  |  Q      |         | V       |         |
15+50      4.8761     5.76  |  Q      |         | V       |         |
15+55      4.9222     6.69  |   Q     |         |  V      |         |
16+ 0      4.9807     8.49  |    Q    |         |  V      |         |
16+ 5      5.0919    16.15  |         Q         |  V      |         |
16+10      5.3400    36.02  |         |         |   QV    |         |
16+15      5.6854    50.15  |         |         |     V   |  Q      |
16+20      5.8507    24.01  |         |     Q   |      V  |         |
16+25      5.9610    16.02  |         Q         |      V  |         |
```

16+30	6.0473	12.52	| Q |	|	| V |	|
16+35	6.1234	11.05	| Q |	|	| V |	|
16+40	6.1876	9.32	| Q |	|	| V|	|
16+45	6.2412	7.79	| Q |	|	| V|	|
16+50	6.2903	7.14	| Q |	|	| V|	|
16+55	6.3365	6.70	| Q |	|	| V|	|
17+ 0	6.3810	6.46	| Q |	|	| V|	|
17+ 5	6.4227	6.06	| Q |	|	| V |	|
17+10	6.4620	5.71	| Q |	|	| V |	|
17+15	6.4990	5.38	| Q |	|	| V |	|
17+20	6.5349	5.21	| Q |	|	| V |	|
17+25	6.5697	5.06	| Q |	|	| V |	|
17+30	6.6036	4.92	| Q |	|	| V |	|
17+35	6.6366	4.79	| Q |	|	| |V |	|
17+40	6.6687	4.67	| Q |	|	| |V |	|
17+45	6.7002	4.57	| Q |	|	| |V |	|
17+50	6.7310	4.47	| Q |	|	| |V |	|
17+55	6.7611	4.38	| Q |	|	| |V |	|
18+ 0	6.7907	4.29	| Q |	|	| |V |	|
18+ 5	6.8199	4.23	| Q |	|	| |V |	|
18+10	6.8491	4.24	| Q |	|	| | V |	|
18+15	6.8787	4.31	| Q |	|	| | V |	|
18+20	6.9083	4.30	| Q |	|	| | V |	|
18+25	6.9377	4.27	| Q |	|	| | V |	|
18+30	6.9669	4.23	| Q |	|	| | V |	|
18+35	6.9957	4.19	| Q |	|	| | V |	|
18+40	7.0243	4.15	| Q |	|	| | V |	|
18+45	7.0526	4.11	| Q |	|	| | V |	|
18+50	7.0806	4.06	| Q |	|	| | V |	|
18+55	7.1083	4.02	| Q |	|	| | V |	|
19+ 0	7.1357	3.98	| Q |	|	| | V |	|
19+ 5	7.1629	3.94	| Q |	|	| | V |	|
19+10	7.1898	3.91	| Q |	|	| | V |	|
19+15	7.2164	3.87	| Q |	|	| | V |	|
19+20	7.2428	3.83	| Q |	|	| | V |	|
19+25	7.2690	3.80	| Q |	|	| | V |	|
19+30	7.2949	3.77	| Q |	|	| | V |	|
19+35	7.3207	3.74	| Q |	|	| | V |	|
19+40	7.3462	3.70	| Q |	|	| | V |	|
19+45	7.3715	3.68	| Q |	|	| | V |	|
19+50	7.3966	3.65	| Q |	|	| | V |	|
19+55	7.4215	3.62	| Q |	|	| | V |	|
20+ 0	7.4463	3.59	| Q |	|	| | V |	|
20+ 5	7.4708	3.57	| Q |	|	| | V |	|
20+10	7.4952	3.54	| Q |	|	| | V |	|
20+15	7.5194	3.52	| Q |	|	| | V |	|
20+20	7.5434	3.49	| Q |	|	| | V |	|
20+25	7.5673	3.47	| Q |	|	| | V |	|
20+30	7.5911	3.45	| Q |	|	| | V |	|
20+35	7.6146	3.42	| Q |	|	| | V |	|
20+40	7.6381	3.40	| Q |	|	| | V |	|
20+45	7.6613	3.38	| Q |	|	| | V |	|
20+50	7.6845	3.36	| Q |	|	| | V |	|
20+55	7.7075	3.34	| Q |	|	| | V |	|
21+ 0	7.7304	3.32	| Q |	|	| | V |	|
21+ 5	7.7531	3.30	| Q |	|	| | V |	|
21+10	7.7757	3.28	| Q |	|	| | V |	|
21+15	7.7982	3.26	| Q |	|	| | V |	|
21+20	7.8205	3.25	| Q |	|	| | V |	|
21+25	7.8428	3.23	| Q |	|	| | V |	|
21+30	7.8649	3.21	| Q |	|	| | V |	|
21+35	7.8869	3.20	| Q |	|	| | V |	|
21+40	7.9088	3.18	| Q |	|	| | V |	|
21+45	7.9306	3.16	| Q |	|	| | V |	|
21+50	7.9523	3.15	| Q |	|	| | V |	|
21+55	7.9738	3.13	| Q |	|	| | V |	|
22+ 0	7.9953	3.12	| Q |	|	| | V |	|
22+ 5	8.0167	3.10	| Q |	|	| | V |	|
22+10	8.0379	3.09	| Q |	|	| | V |	|
22+15	8.0591	3.07	| Q |	|	| | V |	|
22+20	8.0802	3.06	| Q |	|	| | V |	|

```
   22+25       8.1011      3.05  | Q       |         |         |      V  |
   22+30       8.1220      3.03  | Q       |         |         |       V |
   22+35       8.1428      3.02  | Q       |         |         |       V |
   22+40       8.1635      3.01  | Q       |         |         |       V |
   22+45       8.1841      2.99  |Q        |         |         |       V |
   22+50       8.2046      2.98  |Q        |         |         |       V |
   22+55       8.2251      2.97  |Q        |         |         |       V |
   23+ 0       8.2454      2.96  |Q        |         |         |       V |
   23+ 5       8.2657      2.94  |Q        |         |         |       V |
   23+10       8.2859      2.93  |Q        |         |         |       V |
   23+15       8.3060      2.92  |Q        |         |         |       V |
   23+20       8.3260      2.91  |Q        |         |         |        V|
   23+25       8.3460      2.90  |Q        |         |         |        V|
   23+30       8.3659      2.89  |Q        |         |         |        V|
   23+35       8.3857      2.88  |Q        |         |         |        V|
   23+40       8.4054      2.87  |Q        |         |         |        V|
   23+45       8.4251      2.85  |Q        |         |         |        V|
   23+50       8.4447      2.84  |Q        |         |         |        V|
   23+55       8.4642      2.83  |Q        |         |         |        V|
   24+ 0       8.4836      2.82  |Q        |         |         |        V|
   24+ 5       8.5021      2.69  |Q        |         |         |        V|
   24+10       8.5164      2.06  |Q        |         |         |        V|
   24+15       8.5233      1.00  Q         |         |         |        V|
   24+20       8.5274      0.60  Q         |         |         |        V|
   24+25       8.5300      0.37  Q         |         |         |        V|
   24+30       8.5315      0.22  Q         |         |         |        V|
   24+35       8.5324      0.13  Q         |         |         |        V|
   24+40       8.5329      0.07  Q         |         |         |        V|
   24+45       8.5332      0.05  Q         |         |         |        V|
   24+50       8.5334      0.03  Q         |         |         |        V|
   24+55       8.5336      0.02  Q         |         |         |        V|
   25+ 0       8.5336      0.01  Q         |         |         |        V|
   25+ 5       8.5337      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'A' – 100 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/14/24

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
100 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            18.06            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            18.06            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            18.06           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            18.06            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            18.06            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            18.06           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 70.0      87.0         18.06      1.000     0.247    1.000    0.247

Area-averaged adjusted loss rate Fm (In/Hr) =  0.247

********* Area-Averaged low loss rate fraction, Yb **********
```

```
Area       Area          SCS CN    SCS CN      S     Pervious
 (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
    18.06   1.000         70.0      87.0       1.49     0.865

Area-averaged catchment yield fraction, Y =  0.865
Area-averaged low loss fraction, Yb =  0.135
User entry of time of concentration  =   0.202 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area =      18.06(Ac.)
Catchment Lag time =   0.162 hours
Unit interval =   5.000 minutes
Unit interval percentage of lag time = 51.5677
Hydrograph baseflow =     0.00(CFS)
Average maximum watershed loss rate(Fm) =  0.247(In/Hr)
Average low loss rate fraction (Yb) = 0.135 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall =  0.712(In)
Computed peak 30-minute rainfall =  1.218(In)
Specified peak 1-hour rainfall =  1.500(In)
Computed peak 3-hour rainfall =  2.942(In)
Specified peak 6-hour rainfall =  4.500(In)
Specified peak 24-hour rainfall = 12.000(In)


Rainfall depth area reduction factors:
Using a total area of      18.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999     Adjusted rainfall =  0.711(In)
30-minute factor = 0.999    Adjusted rainfall =  1.217(In)
1-hour factor = 0.999       Adjusted rainfall =  1.499(In)
3-hour factor = 1.000       Adjusted rainfall =  2.942(In)
6-hour factor = 1.000       Adjusted rainfall =  4.500(In)
24-hour factor = 1.000      Adjusted rainfall = 12.000(In)
--------------------------------------------------------------------------

                      U n i t  H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Interval          'S' Graph          Unit Hydrograph
Number            Mean values             ((CFS))
--------------------------------------------------------------------------
               (K =       218.41 (CFS))

  1                4.472                   9.767
  2               26.592                  48.314
  3               64.398                  82.572
  4               78.587                  30.990
  5               86.751                  17.831
  6               92.030                  11.532
  7               95.442                   7.452
  8               97.482                   4.455
  9               98.356                   1.909
 10               98.889                   1.165
 11               99.255                   0.797
 12               99.630                   0.821
 13               99.870                   0.524
 14              100.000                   0.283
--------------------------------------------------------------------------
Peak Unit   Adjusted mass rainfall  Unit rainfall
Number              (In)                (In)
  1              0.7112              0.7112
  2              0.8755              0.1644
  3              0.9888              0.1132
  4              1.0779              0.0891
  5              1.1526              0.0746
  6              1.2173              0.0648
  7              1.2750              0.0576
  8              1.3271              0.0521
  9              1.3748              0.0477
 10              1.4190              0.0441
 11              1.4601              0.0412
 12              1.4987              0.0386
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13	1.5742	0.0755
14	1.6475	0.0733
15	1.7187	0.0713
16	1.7882	0.0695
17	1.8560	0.0678
18	1.9223	0.0663
19	1.9871	0.0649
20	2.0507	0.0636
21	2.1130	0.0623
22	2.1742	0.0612
23	2.2344	0.0601
24	2.2935	0.0591
25	2.3517	0.0582
26	2.4090	0.0573
27	2.4655	0.0565
28	2.5211	0.0557
29	2.5760	0.0549
30	2.6302	0.0542
31	2.6837	0.0535
32	2.7365	0.0528
33	2.7887	0.0522
34	2.8402	0.0516
35	2.8912	0.0510
36	2.9416	0.0504
37	2.9915	0.0498
38	3.0408	0.0493
39	3.0896	0.0488
40	3.1380	0.0483
41	3.1859	0.0479
42	3.2333	0.0474
43	3.2803	0.0470
44	3.3268	0.0466
45	3.3730	0.0462
46	3.4188	0.0458
47	3.4642	0.0454
48	3.5092	0.0450
49	3.5538	0.0447
50	3.5981	0.0443
51	3.6421	0.0440
52	3.6857	0.0436
53	3.7290	0.0433
54	3.7720	0.0430
55	3.8147	0.0427
56	3.8571	0.0424
57	3.8992	0.0421
58	3.9410	0.0418
59	3.9825	0.0415
60	4.0238	0.0413
61	4.0648	0.0410
62	4.1055	0.0407
63	4.1460	0.0405
64	4.1862	0.0402
65	4.2262	0.0400
66	4.2659	0.0398
67	4.3055	0.0395
68	4.3448	0.0393
69	4.3838	0.0391
70	4.4227	0.0389
71	4.4613	0.0386
72	4.4997	0.0384
73	4.5439	0.0441
74	4.5878	0.0440
75	4.6316	0.0438
76	4.6752	0.0436
77	4.7187	0.0434
78	4.7619	0.0433
79	4.8051	0.0431
80	4.8480	0.0430
81	4.8908	0.0428
82	4.9335	0.0426
83	4.9759	0.0425

84	5.0183	0.0423
85	5.0605	0.0422
86	5.1025	0.0421
87	5.1444	0.0419
88	5.1862	0.0418
89	5.2278	0.0416
90	5.2693	0.0415
91	5.3107	0.0414
92	5.3519	0.0412
93	5.3930	0.0411
94	5.4340	0.0410
95	5.4748	0.0408
96	5.5155	0.0407
97	5.5561	0.0406
98	5.5966	0.0405
99	5.6369	0.0403
100	5.6772	0.0402
101	5.7173	0.0401
102	5.7573	0.0400
103	5.7971	0.0399
104	5.8369	0.0398
105	5.8766	0.0397
106	5.9161	0.0395
107	5.9555	0.0394
108	5.9949	0.0393
109	6.0341	0.0392
110	6.0732	0.0391
111	6.1122	0.0390
112	6.1511	0.0389
113	6.1899	0.0388
114	6.2287	0.0387
115	6.2673	0.0386
116	6.3058	0.0385
117	6.3442	0.0384
118	6.3825	0.0383
119	6.4207	0.0382
120	6.4589	0.0381
121	6.4969	0.0380
122	6.5348	0.0379
123	6.5727	0.0379
124	6.6105	0.0378
125	6.6481	0.0377
126	6.6857	0.0376
127	6.7232	0.0375
128	6.7606	0.0374
129	6.7980	0.0373
130	6.8352	0.0372
131	6.8724	0.0372
132	6.9094	0.0371
133	6.9464	0.0370
134	6.9833	0.0369
135	7.0202	0.0368
136	7.0569	0.0368
137	7.0936	0.0367
138	7.1302	0.0366
139	7.1667	0.0365
140	7.2032	0.0364
141	7.2395	0.0364
142	7.2758	0.0363
143	7.3120	0.0362
144	7.3482	0.0361
145	7.3842	0.0361
146	7.4202	0.0360
147	7.4562	0.0359
148	7.4920	0.0359
149	7.5278	0.0358
150	7.5635	0.0357
151	7.5992	0.0356
152	7.6347	0.0356
153	7.6702	0.0355
154	7.7057	0.0354

155	7.7410	0.0354
156	7.7763	0.0353
157	7.8116	0.0352
158	7.8468	0.0352
159	7.8819	0.0351
160	7.9169	0.0350
161	7.9519	0.0350
162	7.9868	0.0349
163	8.0216	0.0349
164	8.0564	0.0348
165	8.0912	0.0347
166	8.1258	0.0347
167	8.1604	0.0346
168	8.1950	0.0345
169	8.2295	0.0345
170	8.2639	0.0344
171	8.2982	0.0344
172	8.3326	0.0343
173	8.3668	0.0342
174	8.4010	0.0342
175	8.4351	0.0341
176	8.4692	0.0341
177	8.5032	0.0340
178	8.5372	0.0340
179	8.5711	0.0339
180	8.6049	0.0339
181	8.6387	0.0338
182	8.6725	0.0337
183	8.7062	0.0337
184	8.7398	0.0336
185	8.7734	0.0336
186	8.8069	0.0335
187	8.8404	0.0335
188	8.8738	0.0334
189	8.9072	0.0334
190	8.9405	0.0333
191	8.9738	0.0333
192	9.0070	0.0332
193	9.0401	0.0332
194	9.0733	0.0331
195	9.1063	0.0331
196	9.1393	0.0330
197	9.1723	0.0330
198	9.2052	0.0329
199	9.2381	0.0329
200	9.2709	0.0328
201	9.3037	0.0328
202	9.3364	0.0327
203	9.3691	0.0327
204	9.4017	0.0326
205	9.4343	0.0326
206	9.4669	0.0325
207	9.4994	0.0325
208	9.5318	0.0324
209	9.5642	0.0324
210	9.5966	0.0324
211	9.6289	0.0323
212	9.6611	0.0323
213	9.6934	0.0322
214	9.7255	0.0322
215	9.7577	0.0321
216	9.7898	0.0321
217	9.8218	0.0320
218	9.8538	0.0320
219	9.8858	0.0320
220	9.9177	0.0319
221	9.9496	0.0319
222	9.9814	0.0318
223	10.0132	0.0318
224	10.0449	0.0317
225	10.0766	0.0317

226	10.1083	0.0317
227	10.1399	0.0316
228	10.1715	0.0316
229	10.2031	0.0315
230	10.2346	0.0315
231	10.2660	0.0315
232	10.2975	0.0314
233	10.3288	0.0314
234	10.3602	0.0313
235	10.3915	0.0313
236	10.4228	0.0313
237	10.4540	0.0312
238	10.4852	0.0312
239	10.5163	0.0312
240	10.5474	0.0311
241	10.5785	0.0311
242	10.6096	0.0310
243	10.6406	0.0310
244	10.6715	0.0310
245	10.7025	0.0309
246	10.7333	0.0309
247	10.7642	0.0309
248	10.7950	0.0308
249	10.8258	0.0308
250	10.8565	0.0307
251	10.8872	0.0307
252	10.9179	0.0307
253	10.9485	0.0306
254	10.9792	0.0306
255	11.0097	0.0306
256	11.0402	0.0305
257	11.0707	0.0305
258	11.1012	0.0305
259	11.1316	0.0304
260	11.1620	0.0304
261	11.1924	0.0304
262	11.2227	0.0303
263	11.2530	0.0303
264	11.2833	0.0303
265	11.3135	0.0302
266	11.3437	0.0302
267	11.3738	0.0302
268	11.4039	0.0301
269	11.4340	0.0301
270	11.4641	0.0301
271	11.4941	0.0300
272	11.5241	0.0300
273	11.5541	0.0300
274	11.5840	0.0299
275	11.6139	0.0299
276	11.6438	0.0299
277	11.6736	0.0298
278	11.7034	0.0298
279	11.7332	0.0298
280	11.7629	0.0297
281	11.7926	0.0297
282	11.8223	0.0297
283	11.8520	0.0296
284	11.8816	0.0296
285	11.9112	0.0296
286	11.9407	0.0296
287	11.9702	0.0295
288	11.9997	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0040	0.0255
2	0.0295	0.0040	0.0255
3	0.0296	0.0040	0.0256

4	0.0296	0.0040	0.0256
5	0.0297	0.0040	0.0257
6	0.0297	0.0040	0.0257
7	0.0298	0.0040	0.0257
8	0.0298	0.0040	0.0258
9	0.0299	0.0040	0.0258
10	0.0299	0.0040	0.0259
11	0.0300	0.0041	0.0259
12	0.0300	0.0041	0.0259
13	0.0301	0.0041	0.0260
14	0.0301	0.0041	0.0260
15	0.0302	0.0041	0.0261
16	0.0302	0.0041	0.0261
17	0.0303	0.0041	0.0262
18	0.0303	0.0041	0.0262
19	0.0304	0.0041	0.0263
20	0.0304	0.0041	0.0263
21	0.0305	0.0041	0.0263
22	0.0305	0.0041	0.0264
23	0.0306	0.0041	0.0264
24	0.0306	0.0041	0.0265
25	0.0307	0.0042	0.0265
26	0.0307	0.0042	0.0266
27	0.0308	0.0042	0.0266
28	0.0308	0.0042	0.0266
29	0.0309	0.0042	0.0267
30	0.0309	0.0042	0.0267
31	0.0310	0.0042	0.0268
32	0.0310	0.0042	0.0268
33	0.0311	0.0042	0.0269
34	0.0312	0.0042	0.0269
35	0.0312	0.0042	0.0270
36	0.0313	0.0042	0.0270
37	0.0313	0.0042	0.0271
38	0.0314	0.0042	0.0271
39	0.0315	0.0043	0.0272
40	0.0315	0.0043	0.0272
41	0.0316	0.0043	0.0273
42	0.0316	0.0043	0.0273
43	0.0317	0.0043	0.0274
44	0.0317	0.0043	0.0275
45	0.0318	0.0043	0.0275
46	0.0319	0.0043	0.0276
47	0.0320	0.0043	0.0276
48	0.0320	0.0043	0.0277
49	0.0321	0.0043	0.0277
50	0.0321	0.0043	0.0278
51	0.0322	0.0044	0.0279
52	0.0323	0.0044	0.0279
53	0.0324	0.0044	0.0280
54	0.0324	0.0044	0.0280
55	0.0325	0.0044	0.0281
56	0.0325	0.0044	0.0281
57	0.0326	0.0044	0.0282
58	0.0327	0.0044	0.0283
59	0.0328	0.0044	0.0283
60	0.0328	0.0044	0.0284
61	0.0329	0.0045	0.0285
62	0.0330	0.0045	0.0285
63	0.0331	0.0045	0.0286
64	0.0331	0.0045	0.0286
65	0.0332	0.0045	0.0287
66	0.0333	0.0045	0.0288
67	0.0334	0.0045	0.0289
68	0.0334	0.0045	0.0289
69	0.0335	0.0045	0.0290
70	0.0336	0.0045	0.0290
71	0.0337	0.0046	0.0291
72	0.0337	0.0046	0.0292
73	0.0339	0.0046	0.0293
74	0.0339	0.0046	0.0293

75	0.0340	0.0046	0.0294
76	0.0341	0.0046	0.0295
77	0.0342	0.0046	0.0296
78	0.0342	0.0046	0.0296
79	0.0344	0.0047	0.0297
80	0.0344	0.0047	0.0298
81	0.0345	0.0047	0.0299
82	0.0346	0.0047	0.0299
83	0.0347	0.0047	0.0300
84	0.0348	0.0047	0.0301
85	0.0349	0.0047	0.0302
86	0.0350	0.0047	0.0302
87	0.0351	0.0048	0.0304
88	0.0352	0.0048	0.0304
89	0.0353	0.0048	0.0305
90	0.0354	0.0048	0.0306
91	0.0355	0.0048	0.0307
92	0.0356	0.0048	0.0308
93	0.0357	0.0048	0.0309
94	0.0358	0.0048	0.0309
95	0.0359	0.0049	0.0311
96	0.0360	0.0049	0.0311
97	0.0361	0.0049	0.0313
98	0.0362	0.0049	0.0313
99	0.0364	0.0049	0.0314
100	0.0364	0.0049	0.0315
101	0.0366	0.0050	0.0316
102	0.0367	0.0050	0.0317
103	0.0368	0.0050	0.0318
104	0.0369	0.0050	0.0319
105	0.0371	0.0050	0.0321
106	0.0372	0.0050	0.0321
107	0.0373	0.0051	0.0323
108	0.0374	0.0051	0.0324
109	0.0376	0.0051	0.0325
110	0.0377	0.0051	0.0326
111	0.0379	0.0051	0.0327
112	0.0379	0.0051	0.0328
113	0.0381	0.0052	0.0330
114	0.0382	0.0052	0.0331
115	0.0384	0.0052	0.0332
116	0.0385	0.0052	0.0333
117	0.0387	0.0052	0.0335
118	0.0388	0.0053	0.0336
119	0.0390	0.0053	0.0337
120	0.0391	0.0053	0.0338
121	0.0393	0.0053	0.0340
122	0.0394	0.0053	0.0341
123	0.0397	0.0054	0.0343
124	0.0398	0.0054	0.0344
125	0.0400	0.0054	0.0346
126	0.0401	0.0054	0.0347
127	0.0403	0.0055	0.0349
128	0.0405	0.0055	0.0350
129	0.0407	0.0055	0.0352
130	0.0408	0.0055	0.0353
131	0.0411	0.0056	0.0355
132	0.0412	0.0056	0.0356
133	0.0415	0.0056	0.0359
134	0.0416	0.0056	0.0360
135	0.0419	0.0057	0.0362
136	0.0421	0.0057	0.0364
137	0.0423	0.0057	0.0366
138	0.0425	0.0058	0.0367
139	0.0428	0.0058	0.0370
140	0.0430	0.0058	0.0371
141	0.0433	0.0059	0.0374
142	0.0434	0.0059	0.0376
143	0.0438	0.0059	0.0379
144	0.0440	0.0059	0.0380
145	0.0384	0.0052	0.0332

146	0.0386	0.0052	0.0334
147	0.0391	0.0053	0.0338
148	0.0393	0.0053	0.0340
149	0.0398	0.0054	0.0344
150	0.0400	0.0054	0.0346
151	0.0405	0.0055	0.0350
152	0.0407	0.0055	0.0352
153	0.0413	0.0056	0.0357
154	0.0415	0.0056	0.0359
155	0.0421	0.0057	0.0364
156	0.0424	0.0057	0.0366
157	0.0430	0.0058	0.0372
158	0.0433	0.0059	0.0374
159	0.0440	0.0059	0.0380
160	0.0443	0.0060	0.0383
161	0.0450	0.0061	0.0389
162	0.0454	0.0061	0.0392
163	0.0462	0.0062	0.0399
164	0.0466	0.0063	0.0403
165	0.0474	0.0064	0.0410
166	0.0479	0.0065	0.0414
167	0.0488	0.0066	0.0422
168	0.0493	0.0067	0.0426
169	0.0504	0.0068	0.0436
170	0.0510	0.0069	0.0441
171	0.0522	0.0071	0.0451
172	0.0528	0.0071	0.0457
173	0.0542	0.0073	0.0468
174	0.0549	0.0074	0.0475
175	0.0565	0.0076	0.0488
176	0.0573	0.0078	0.0495
177	0.0591	0.0080	0.0511
178	0.0601	0.0081	0.0520
179	0.0623	0.0084	0.0539
180	0.0636	0.0086	0.0550
181	0.0663	0.0090	0.0573
182	0.0678	0.0092	0.0586
183	0.0713	0.0096	0.0616
184	0.0733	0.0099	0.0633
185	0.0386	0.0052	0.0334
186	0.0412	0.0056	0.0356
187	0.0477	0.0065	0.0413
188	0.0521	0.0071	0.0451
189	0.0648	0.0088	0.0560
190	0.0746	0.0101	0.0645
191	0.1132	0.0153	0.0979
192	0.1644	0.0206	0.1438
193	0.7112	0.0206	0.6906
194	0.0891	0.0121	0.0771
195	0.0576	0.0078	0.0498
196	0.0441	0.0060	0.0382
197	0.0755	0.0102	0.0653
198	0.0695	0.0094	0.0601
199	0.0649	0.0088	0.0561
200	0.0612	0.0083	0.0529
201	0.0582	0.0079	0.0503
202	0.0557	0.0075	0.0481
203	0.0535	0.0072	0.0462
204	0.0516	0.0070	0.0446
205	0.0498	0.0067	0.0431
206	0.0483	0.0065	0.0418
207	0.0470	0.0064	0.0406
208	0.0458	0.0062	0.0396
209	0.0447	0.0060	0.0386
210	0.0436	0.0059	0.0377
211	0.0427	0.0058	0.0369
212	0.0418	0.0057	0.0361
213	0.0410	0.0055	0.0354
214	0.0402	0.0054	0.0348
215	0.0395	0.0053	0.0342
216	0.0389	0.0053	0.0336

217	0.0441	0.0060	0.0382
218	0.0436	0.0059	0.0377
219	0.0431	0.0058	0.0373
220	0.0426	0.0058	0.0369
221	0.0422	0.0057	0.0365
222	0.0418	0.0057	0.0361
223	0.0414	0.0056	0.0358
224	0.0410	0.0055	0.0354
225	0.0406	0.0055	0.0351
226	0.0402	0.0054	0.0348
227	0.0399	0.0054	0.0345
228	0.0395	0.0054	0.0342
229	0.0392	0.0053	0.0339
230	0.0389	0.0053	0.0336
231	0.0386	0.0052	0.0334
232	0.0383	0.0052	0.0331
233	0.0380	0.0051	0.0329
234	0.0378	0.0051	0.0327
235	0.0375	0.0051	0.0324
236	0.0372	0.0050	0.0322
237	0.0370	0.0050	0.0320
238	0.0368	0.0050	0.0318
239	0.0365	0.0049	0.0316
240	0.0363	0.0049	0.0314
241	0.0361	0.0049	0.0312
242	0.0359	0.0049	0.0310
243	0.0356	0.0048	0.0308
244	0.0354	0.0048	0.0306
245	0.0352	0.0048	0.0305
246	0.0350	0.0047	0.0303
247	0.0349	0.0047	0.0301
248	0.0347	0.0047	0.0300
249	0.0345	0.0047	0.0298
250	0.0343	0.0046	0.0297
251	0.0341	0.0046	0.0295
252	0.0340	0.0046	0.0294
253	0.0338	0.0046	0.0292
254	0.0336	0.0046	0.0291
255	0.0335	0.0045	0.0289
256	0.0333	0.0045	0.0288
257	0.0332	0.0045	0.0287
258	0.0330	0.0045	0.0285
259	0.0329	0.0044	0.0284
260	0.0327	0.0044	0.0283
261	0.0326	0.0044	0.0282
262	0.0324	0.0044	0.0281
263	0.0323	0.0044	0.0279
264	0.0322	0.0044	0.0278
265	0.0320	0.0043	0.0277
266	0.0319	0.0043	0.0276
267	0.0318	0.0043	0.0275
268	0.0317	0.0043	0.0274
269	0.0315	0.0043	0.0273
270	0.0314	0.0043	0.0272
271	0.0313	0.0042	0.0271
272	0.0312	0.0042	0.0270
273	0.0311	0.0042	0.0269
274	0.0310	0.0042	0.0268
275	0.0309	0.0042	0.0267
276	0.0307	0.0042	0.0266
277	0.0306	0.0041	0.0265
278	0.0305	0.0041	0.0264
279	0.0304	0.0041	0.0263
280	0.0303	0.0041	0.0262
281	0.0302	0.0041	0.0261
282	0.0301	0.0041	0.0260
283	0.0300	0.0041	0.0260
284	0.0299	0.0041	0.0259
285	0.0298	0.0040	0.0258
286	0.0297	0.0040	0.0257
287	0.0296	0.0040	0.0256

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      288             0.0296          0.0040             0.0256
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      1.55(In)
      Total effective rainfall =     10.45(In)
      Peak flow rate in flood hydrograph =     69.04(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       17.5      35.0      52.5      70.0
----------------------------------------------------------------------------
  0+ 5       0.0017      0.25  Q         |         |         |         |
  0+10       0.0119      1.48  Q         |         |         |         |
  0+15       0.0366      3.59  V Q       |         |         |         |
  0+20       0.0668      4.38  V Q       |         |         |         |
  0+25       0.1002      4.85  V Q       |         |         |         |
  0+30       0.1357      5.15  V Q       |         |         |         |
  0+35       0.1725      5.35  V  Q      |         |         |         |
  0+40       0.2101      5.47  V  Q      |         |         |         |
  0+45       0.2482      5.52  V  Q      |         |         |         |
  0+50       0.2865      5.56  V  Q      |         |         |         |
  0+55       0.3250      5.59  V  Q      |         |         |         |
  1+ 0       0.3637      5.62  V  Q      |         |         |         |
  1+ 5       0.4026      5.64  |V Q      |         |         |         |
  1+10       0.4416      5.66  |V Q      |         |         |         |
  1+15       0.4806      5.67  |V Q      |         |         |         |
  1+20       0.5197      5.68  |V Q      |         |         |         |
  1+25       0.5589      5.69  |V Q      |         |         |         |
  1+30       0.5982      5.70  |V Q      |         |         |         |
  1+35       0.6375      5.71  |V Q      |         |         |         |
  1+40       0.6768      5.72  |V Q      |         |         |         |
  1+45       0.7163      5.73  |V Q      |         |         |         |
  1+50       0.7558      5.74  |V Q      |         |         |         |
  1+55       0.7954      5.75  | VQ      |         |         |         |
  2+ 0       0.8350      5.76  | VQ      |         |         |         |
  2+ 5       0.8747      5.77  | VQ      |         |         |         |
  2+10       0.9145      5.78  | VQ      |         |         |         |
  2+15       0.9543      5.79  | VQ      |         |         |         |
  2+20       0.9942      5.80  | VQ      |         |         |         |
  2+25       1.0342      5.81  | VQ      |         |         |         |
  2+30       1.0743      5.82  | VQ      |         |         |         |
  2+35       1.1144      5.83  | VQ      |         |         |         |
  2+40       1.1546      5.84  | VQ      |         |         |         |
  2+45       1.1949      5.85  |  Q      |         |         |         |
  2+50       1.2352      5.86  |  Q      |         |         |         |
  2+55       1.2756      5.87  |  Q      |         |         |         |
  3+ 0       1.3161      5.88  |  Q      |         |         |         |
  3+ 5       1.3567      5.89  |  Q      |         |         |         |
  3+10       1.3973      5.90  |  Q      |         |         |         |
  3+15       1.4380      5.91  |  Q      |         |         |         |
  3+20       1.4788      5.92  |  Q      |         |         |         |
  3+25       1.5197      5.93  |  Q      |         |         |         |
  3+30       1.5606      5.95  |  Q      |         |         |         |
  3+35       1.6016      5.96  |  QV     |         |         |         |
  3+40       1.6427      5.97  |  QV     |         |         |         |
  3+45       1.6839      5.98  |  QV     |         |         |         |
  3+50       1.7252      5.99  |  QV     |         |         |         |
  3+55       1.7665      6.00  |  QV     |         |         |         |
  4+ 0       1.8080      6.01  |  QV     |         |         |         |
  4+ 5       1.8495      6.03  |  QV     |         |         |         |
  4+10       1.8911      6.04  |  QV     |         |         |         |
  4+15       1.9327      6.05  |  QV     |         |         |         |
  4+20       1.9745      6.06  |  Q V    |         |         |         |
  4+25       2.0163      6.08  |  Q V    |         |         |         |
  4+30       2.0583      6.09  |  Q V    |         |         |         |
  4+35       2.1003      6.10  |  Q V    |         |         |         |
```

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 4+40      2.1424      6.11  |  Q V    |         |         |         |
 4+45      2.1846      6.13  |  Q V    |         |         |         |
 4+50      2.2269      6.14  |  Q V    |         |         |         |
 4+55      2.2693      6.15  |  Q V    |         |         |         |
 5+ 0      2.3117      6.17  |  Q V    |         |         |         |
 5+ 5      2.3543      6.18  |  Q V    |         |         |         |
 5+10      2.3969      6.19  |  Q  V   |         |         |         |
 5+15      2.4397      6.21  |  Q  V   |         |         |         |
 5+20      2.4825      6.22  |  Q  V   |         |         |         |
 5+25      2.5255      6.23  |  Q  V   |         |         |         |
 5+30      2.5685      6.25  |  Q  V   |         |         |         |
 5+35      2.6116      6.26  |  Q  V   |         |         |         |
 5+40      2.6549      6.28  |  Q  V   |         |         |         |
 5+45      2.6982      6.29  |  Q  V   |         |         |         |
 5+50      2.7416      6.31  |  Q  V   |         |         |         |
 5+55      2.7852      6.32  |  Q   V  |         |         |         |
 6+ 0      2.8288      6.34  |  Q   V  |         |         |         |
 6+ 5      2.8725      6.35  |  Q   V  |         |         |         |
 6+10      2.9164      6.37  |  Q   V  |         |         |         |
 6+15      2.9603      6.38  |  Q   V  |         |         |         |
 6+20      3.0044      6.40  |  Q   V  |         |         |         |
 6+25      3.0486      6.41  |  Q   V  |         |         |         |
 6+30      3.0928      6.43  |  Q   V  |         |         |         |
 6+35      3.1372      6.45  |  Q   V  |         |         |         |
 6+40      3.1817      6.46  |  Q    V |         |         |         |
 6+45      3.2263      6.48  |  Q    V |         |         |         |
 6+50      3.2711      6.49  |  Q    V |         |         |         |
 6+55      3.3159      6.51  |  Q    V |         |         |         |
 7+ 0      3.3609      6.53  |  Q    V |         |         |         |
 7+ 5      3.4060      6.55  |  Q    V |         |         |         |
 7+10      3.4512      6.56  |  Q    V |         |         |         |
 7+15      3.4965      6.58  |  Q    V |         |         |         |
 7+20      3.5419      6.60  |  Q     V|         |         |         |
 7+25      3.5875      6.62  |  Q     V|         |         |         |
 7+30      3.6332      6.63  |  Q     V|         |         |         |
 7+35      3.6790      6.65  |  Q     V|         |         |         |
 7+40      3.7250      6.67  |  Q     V|         |         |         |
 7+45      3.7710      6.69  |  Q     V|         |         |         |
 7+50      3.8173      6.71  |  Q     V|         |         |         |
 7+55      3.8636      6.73  |  Q     V|         |         |         |
 8+ 0      3.9101      6.75  |  Q     V|         |         |         |
 8+ 5      3.9567      6.77  |  Q      V         |         |         |
 8+10      4.0035      6.79  |  Q      V         |         |         |
 8+15      4.0504      6.81  |  Q      V         |         |         |
 8+20      4.0974      6.83  |  Q      V         |         |         |
 8+25      4.1446      6.85  |  Q      V         |         |         |
 8+30      4.1920      6.87  |  Q      V         |         |         |
 8+35      4.2395      6.90  |  Q      V         |         |         |
 8+40      4.2871      6.92  |  Q      V         |         |         |
 8+45      4.3349      6.94  |  Q      |V        |         |         |
 8+50      4.3829      6.96  |  Q      |V        |         |         |
 8+55      4.4310      6.99  |  Q      |V        |         |         |
 9+ 0      4.4792      7.01  |   Q     |V        |         |         |
 9+ 5      4.5277      7.03  |   Q     |V        |         |         |
 9+10      4.5763      7.06  |   Q     |V        |         |         |
 9+15      4.6250      7.08  |   Q     |V        |         |         |
 9+20      4.6740      7.10  |   Q     |V        |         |         |
 9+25      4.7231      7.13  |   Q     | V       |         |         |
 9+30      4.7724      7.16  |   Q     | V       |         |         |
 9+35      4.8218      7.18  |   Q     | V       |         |         |
 9+40      4.8715      7.21  |   Q     | V       |         |         |
 9+45      4.9213      7.24  |   Q     | V       |         |         |
 9+50      4.9713      7.26  |   Q     | V       |         |         |
 9+55      5.0215      7.29  |   Q     | V       |         |         |
10+ 0      5.0719      7.32  |   Q     | V       |         |         |
10+ 5      5.1225      7.35  |   Q     |  V      |         |         |
10+10      5.1733      7.38  |   Q     |  V      |         |         |
10+15      5.2243      7.41  |   Q     |  V      |         |         |
10+20      5.2755      7.44  |   Q     |  V      |         |         |
10+25      5.3270      7.47  |   Q     |  V      |         |         |
10+30      5.3786      7.50  |   Q     |  V      |         |         |
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10+35      5.4304     7.53  |   Q     |  V      |         |         |
10+40      5.4825     7.56  |   Q     |  V      |         |         |
10+45      5.5348     7.60  |   Q     |   V     |         |         |
10+50      5.5874     7.63  |   Q     |   V     |         |         |
10+55      5.6402     7.66  |   Q     |   V     |         |         |
11+ 0      5.6932     7.70  |   Q     |   V     |         |         |
11+ 5      5.7465     7.74  |   Q     |   V     |         |         |
11+10      5.8000     7.77  |   Q     |   V     |         |         |
11+15      5.8538     7.81  |   Q     |   V     |         |         |
11+20      5.9078     7.85  |   Q     |    V    |         |         |
11+25      5.9621     7.89  |   Q     |    V    |         |         |
11+30      6.0167     7.93  |   Q     |    V    |         |         |
11+35      6.0716     7.97  |   Q     |    V    |         |         |
11+40      6.1267     8.01  |   Q     |    V    |         |         |
11+45      6.1822     8.05  |   Q     |    V    |         |         |
11+50      6.2380     8.10  |   Q     |    V    |         |         |
11+55      6.2940     8.14  |   Q     |     V   |         |         |
12+ 0      6.3504     8.19  |   Q     |     V   |         |         |
12+ 5      6.4068     8.19  |   Q     |     V   |         |         |
12+10      6.4618     7.99  |   Q     |     V   |         |         |
12+15      6.5143     7.62  |   Q     |     V   |         |         |
12+20      6.5660     7.52  |   Q     |     V   |         |         |
12+25      6.6176     7.49  |   Q     |     V   |         |         |
12+30      6.6691     7.49  |   Q     |     V   |         |         |
12+35      6.7209     7.51  |   Q     |      V  |         |         |
12+40      6.7729     7.56  |   Q     |      V  |         |         |
12+45      6.8254     7.62  |   Q     |      V  |         |         |
12+50      6.8783     7.68  |   Q     |      V  |         |         |
12+55      6.9316     7.75  |   Q     |      V  |         |         |
13+ 0      6.9855     7.82  |   Q     |      V  |         |         |
13+ 5      7.0399     7.90  |   Q     |      V  |         |         |
13+10      7.0948     7.97  |   Q     |       V |         |         |
13+15      7.1503     8.06  |   Q     |       V |         |         |
13+20      7.2064     8.15  |   Q     |       V |         |         |
13+25      7.2631     8.24  |   Q     |       V |         |         |
13+30      7.3205     8.33  |   Q     |       V |         |         |
13+35      7.3786     8.43  |   Q     |       V |         |         |
13+40      7.4374     8.53  |   Q     |       V |         |         |
13+45      7.4969     8.64  |   Q     |        V|         |         |
13+50      7.5572     8.75  |    Q    |        V|         |         |
13+55      7.6183     8.88  |    Q    |        V|         |         |
14+ 0      7.6803     9.00  |    Q    |        V|         |         |
14+ 5      7.7432     9.13  |    Q    |        V|         |         |
14+10      7.8070     9.27  |    Q    |        V|         |         |
14+15      7.8719     9.42  |    Q    |         V         |         |
14+20      7.9378     9.57  |    Q    |         V         |         |
14+25      8.0050     9.74  |    Q    |         V         |         |
14+30      8.0732     9.91  |    Q    |         V         |         |
14+35      8.1428    10.11  |    Q    |         V         |         |
14+40      8.2138    10.30  |    Q    |         V         |         |
14+45      8.2863    10.52  |     Q   |         |V        |         |
14+50      8.3603    10.75  |     Q   |         |V        |         |
14+55      8.4361    11.01  |     Q   |         |V        |         |
15+ 0      8.5137    11.27  |     Q   |         |V        |         |
15+ 5      8.5935    11.59  |     Q   |         |V        |         |
15+10      8.6755    11.91  |     Q   |         | V       |         |
15+15      8.7602    12.29  |      Q  |         | V       |         |
15+20      8.8476    12.69  |      Q  |         | V       |         |
15+25      8.9361    12.85  |      Q  |         | V       |         |
15+30      9.0169    11.73  |     Q   |         | V       |         |
15+35      9.0829     9.57  |    Q    |         |  V      |         |
15+40      9.1464     9.23  |    Q    |         |  V      |         |
15+45      9.2124     9.58  |    Q    |         |  V      |         |
15+50      9.2841    10.41  |    Q    |         |  V      |         |
15+55      9.3674    12.09  |     Q   |         |  V      |         |
16+ 0      9.4723    15.22  |       Q |         |   V     |         |
16+ 5      9.6516    26.04  |         |   Q     |   V     |         |
16+10     10.0070    51.60  |         |         |    V   Q|         |
16+15     10.4825    69.04  |         |         |     V   |        Q|
16+20     10.7250    35.21  |         |         Q      V  |         |
16+25     10.8918    24.23  |         |  Q      |      V  |         |
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16+30     11.0266     19.57  |          |Q         |        V |          |
16+35     11.1503     17.96  |          Q          |        V |          |
16+40     11.2580     15.64  |        Q |          |        V |          |
16+45     11.3511     13.52  |       Q  |          |        V |          |
16+50     11.4374     12.54  |       Q  |          |         V|          |
16+55     11.5190     11.84  |     Q    |          |         V|          |
17+ 0     11.5974     11.39  |     Q    |          |         V|          |
17+ 5     11.6715     10.75  |     Q    |          |         V|          |
17+10     11.7416     10.19  |    Q     |          |         V|          |
17+15     11.8081      9.66  |    Q     |          |          V          |
17+20     11.8725      9.35  |    Q     |          |          V          |
17+25     11.9351      9.08  |    Q     |          |          V          |
17+30     11.9959      8.83  |    Q     |          |          V          |
17+35     12.0551      8.60  |   Q      |          |          V          |
17+40     12.1129      8.39  |   Q      |          |          V          |
17+45     12.1693      8.20  |   Q      |          |          V          |
17+50     12.2245      8.02  |   Q      |          |          |V         |
17+55     12.2786      7.85  |   Q      |          |          |V         |
18+ 0     12.3316      7.70  |   Q      |          |          |V         |
18+ 5     12.3841      7.61  |   Q      |          |          |V         |
18+10     12.4372      7.72  |   Q      |          |          |V         |
18+15     12.4925      8.02  |   Q      |          |          |V         |
18+20     12.5481      8.07  |   Q      |          |          |V         |
18+25     12.6037      8.06  |   Q      |          |          | V        |
18+30     12.6589      8.03  |   Q      |          |          | V        |
18+35     12.7139      7.98  |   Q      |          |          | V        |
18+40     12.7684      7.92  |   Q      |          |          | V        |
18+45     12.8224      7.84  |   Q      |          |          | V        |
18+50     12.8760      7.77  |   Q      |          |          | V        |
18+55     12.9290      7.70  |   Q      |          |          | V        |
19+ 0     12.9816      7.64  |   Q      |          |          |  V       |
19+ 5     13.0338      7.57  |   Q      |          |          |  V       |
19+10     13.0855      7.51  |   Q      |          |          |  V       |
19+15     13.1368      7.45  |   Q      |          |          |  V       |
19+20     13.1877      7.39  |   Q      |          |          |  V       |
19+25     13.2381      7.33  |   Q      |          |          |  V       |
19+30     13.2882      7.27  |   Q      |          |          |  V       |
19+35     13.3379      7.22  |   Q      |          |          |  V       |
19+40     13.3873      7.16  |   Q      |          |          |   V      |
19+45     13.4362      7.11  |   Q      |          |          |   V      |
19+50     13.4849      7.06  |   Q      |          |          |   V      |
19+55     13.5332      7.02  |   Q      |          |          |   V      |
20+ 0     13.5812      6.97  |  Q       |          |          |   V      |
20+ 5     13.6289      6.92  |  Q       |          |          |   V      |
20+10     13.6763      6.88  |  Q       |          |          |   V      |
20+15     13.7234      6.84  |  Q       |          |          |   V      |
20+20     13.7702      6.80  |  Q       |          |          |    V     |
20+25     13.8167      6.76  |  Q       |          |          |    V     |
20+30     13.8630      6.72  |  Q       |          |          |    V     |
20+35     13.9090      6.68  |  Q       |          |          |    V     |
20+40     13.9547      6.64  |  Q       |          |          |    V     |
20+45     14.0002      6.60  |  Q       |          |          |    V     |
20+50     14.0455      6.57  |  Q       |          |          |    V     |
20+55     14.0905      6.53  |  Q       |          |          |    V     |
21+ 0     14.1352      6.50  |  Q       |          |          |    V     |
21+ 5     14.1798      6.47  |  Q       |          |          |     V    |
21+10     14.2241      6.43  |  Q       |          |          |     V    |
21+15     14.2682      6.40  |  Q       |          |          |     V    |
21+20     14.3120      6.37  |  Q       |          |          |     V    |
21+25     14.3557      6.34  |  Q       |          |          |     V    |
21+30     14.3992      6.31  |  Q       |          |          |     V    |
21+35     14.4424      6.28  |  Q       |          |          |     V    |
21+40     14.4855      6.25  |  Q       |          |          |     V    |
21+45     14.5284      6.22  |  Q       |          |          |     V    |
21+50     14.5710      6.20  |  Q       |          |          |      V   |
21+55     14.6135      6.17  |  Q       |          |          |      V   |
22+ 0     14.6559      6.14  |  Q       |          |          |      V   |
22+ 5     14.6980      6.12  |  Q       |          |          |      V   |
22+10     14.7400      6.09  |  Q       |          |          |      V   |
22+15     14.7817      6.07  |  Q       |          |          |      V   |
22+20     14.8234      6.04  |  Q       |          |          |      V   |
```

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   22+25      14.8648      6.02  |  Q      |         |         |      V  |
   22+30      14.9061      5.99  |  Q      |         |         |      V  |
   22+35      14.9472      5.97  |  Q      |         |         |       V |
   22+40      14.9882      5.95  |  Q      |         |         |       V |
   22+45      15.0290      5.93  |  Q      |         |         |       V |
   22+50      15.0697      5.90  |  Q      |         |         |       V |
   22+55      15.1102      5.88  |  Q      |         |         |       V |
   23+ 0      15.1505      5.86  |  Q      |         |         |       V |
   23+ 5      15.1907      5.84  |  Q      |         |         |       V |
   23+10      15.2308      5.82  |  Q      |         |         |       V |
   23+15      15.2708      5.80  |  Q      |         |         |       V |
   23+20      15.3105      5.78  |  Q      |         |         |       V |
   23+25      15.3502      5.76  |  Q      |         |         |        V|
   23+30      15.3897      5.74  |  Q      |         |         |        V|
   23+35      15.4291      5.72  |  Q      |         |         |        V|
   23+40      15.4684      5.70  |  Q      |         |         |        V|
   23+45      15.5075      5.68  |  Q      |         |         |        V|
   23+50      15.5465      5.66  |  Q      |         |         |        V|
   23+55      15.5854      5.65  |  Q      |         |         |        V|
   24+ 0      15.6241      5.63  |  Q      |         |         |        V|
   24+ 5      15.6611      5.36  |  Q      |         |         |        V|
   24+10      15.6894      4.11  | Q       |         |         |        V|
   24+15      15.7031      2.00  |Q        |         |         |        V|
   24+20      15.7114      1.20  Q         |         |         |        V|
   24+25      15.7165      0.74  Q         |         |         |        V|
   24+30      15.7196      0.45  Q         |         |         |        V|
   24+35      15.7214      0.26  Q         |         |         |        V|
   24+40      15.7223      0.14  Q         |         |         |        V|
   24+45      15.7230      0.09  Q         |         |         |        V|
   24+50      15.7234      0.06  Q         |         |         |        V|
   24+55      15.7237      0.04  Q         |         |         |        V|
   25+ 0      15.7238      0.02  Q         |         |         |        V|
   25+ 5      15.7239      0.01  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'B' – 2 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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                Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
2 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 2

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             4.33            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      60.6          4.33      1.000     0.671    1.000    0.671

Area-averaged adjusted loss rate Fm (In/Hr) =  0.671

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
4.33	1.000	78.0	60.6	6.50	0.198

Area-averaged catchment yield fraction, Y = 0.198
Area-averaged low loss fraction, Yb = 0.802
User entry of time of concentration = 0.182 (hours)
++
Watershed area = 4.33(Ac.)
Catchment Lag time = 0.146 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 57.2344
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.671(In/Hr)
Average low loss rate fraction (Yb) = 0.802 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 4.33(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.309(In)
30-minute factor = 1.000 Adjusted rainfall = 0.528(In)
1-hour factor = 1.000 Adjusted rainfall = 0.650(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

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

++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 52.37 (CFS))	
1	5.210	2.728
2	33.842	14.993
3	69.240	18.537
4	82.158	6.765
5	89.615	3.905
6	94.272	2.439
7	97.009	1.433
8	98.250	0.650
9	98.857	0.318
10	99.271	0.217
11	99.677	0.213
12	99.909	0.121
13	100.000	0.048

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3086	0.3086
2	0.3799	0.0713
3	0.4291	0.0491
4	0.4678	0.0387
5	0.5002	0.0324
6	0.5283	0.0281
7	0.5533	0.0250
8	0.5759	0.0226
9	0.5966	0.0207
10	0.6158	0.0192
11	0.6336	0.0179
12	0.6504	0.0168
13	0.6839	0.0335

14	0.7164	0.0325
15	0.7481	0.0317
16	0.7789	0.0309
17	0.8091	0.0302
18	0.8386	0.0295
19	0.8676	0.0289
20	0.8959	0.0284
21	0.9237	0.0278
22	0.9511	0.0273
23	0.9780	0.0269
24	1.0044	0.0264
25	1.0305	0.0260
26	1.0561	0.0257
27	1.0814	0.0253
28	1.1063	0.0249
29	1.1310	0.0246
30	1.1553	0.0243
31	1.1792	0.0240
32	1.2030	0.0237
33	1.2264	0.0234
34	1.2496	0.0232
35	1.2725	0.0229
36	1.2952	0.0227
37	1.3176	0.0224
38	1.3398	0.0222
39	1.3618	0.0220
40	1.3836	0.0218
41	1.4052	0.0216
42	1.4266	0.0214
43	1.4478	0.0212
44	1.4688	0.0210
45	1.4896	0.0208
46	1.5103	0.0207
47	1.5308	0.0205
48	1.5511	0.0203
49	1.5713	0.0202
50	1.5913	0.0200
51	1.6112	0.0199
52	1.6309	0.0197
53	1.6505	0.0196
54	1.6700	0.0195
55	1.6893	0.0193
56	1.7085	0.0192
57	1.7275	0.0191
58	1.7465	0.0189
59	1.7653	0.0188
60	1.7840	0.0187
61	1.8026	0.0186
62	1.8210	0.0185
63	1.8394	0.0184
64	1.8576	0.0182
65	1.8758	0.0181
66	1.8938	0.0180
67	1.9117	0.0179
68	1.9296	0.0178
69	1.9473	0.0177
70	1.9650	0.0176
71	1.9825	0.0175
72	2.0000	0.0175
73	2.0138	0.0138
74	2.0276	0.0137
75	2.0412	0.0137
76	2.0548	0.0136
77	2.0683	0.0135
78	2.0816	0.0134
79	2.0949	0.0133
80	2.1082	0.0132
81	2.1213	0.0131
82	2.1343	0.0131
83	2.1473	0.0130
84	2.1602	0.0129

85	2.1730	0.0128
86	2.1858	0.0127
87	2.1985	0.0127
88	2.2111	0.0126
89	2.2236	0.0125
90	2.2360	0.0125
91	2.2484	0.0124
92	2.2607	0.0123
93	2.2730	0.0123
94	2.2852	0.0122
95	2.2973	0.0121
96	2.3094	0.0121
97	2.3214	0.0120
98	2.3333	0.0119
99	2.3452	0.0119
100	2.3570	0.0118
101	2.3688	0.0118
102	2.3804	0.0117
103	2.3921	0.0116
104	2.4037	0.0116
105	2.4152	0.0115
106	2.4267	0.0115
107	2.4381	0.0114
108	2.4495	0.0114
109	2.4608	0.0113
110	2.4720	0.0113
111	2.4833	0.0112
112	2.4944	0.0112
113	2.5055	0.0111
114	2.5166	0.0111
115	2.5276	0.0110
116	2.5386	0.0110
117	2.5495	0.0109
118	2.5604	0.0109
119	2.5712	0.0108
120	2.5820	0.0108
121	2.5927	0.0107
122	2.6034	0.0107
123	2.6140	0.0106
124	2.6246	0.0106
125	2.6352	0.0106
126	2.6457	0.0105
127	2.6562	0.0105
128	2.6666	0.0104
129	2.6770	0.0104
130	2.6874	0.0104
131	2.6977	0.0103
132	2.7080	0.0103
133	2.7182	0.0102
134	2.7284	0.0102
135	2.7386	0.0102
136	2.7487	0.0101
137	2.7588	0.0101
138	2.7688	0.0101
139	2.7789	0.0100
140	2.7888	0.0100
141	2.7988	0.0099
142	2.8087	0.0099
143	2.8186	0.0099
144	2.8284	0.0098
145	2.8382	0.0098
146	2.8480	0.0098
147	2.8577	0.0097
148	2.8674	0.0097
149	2.8771	0.0097
150	2.8867	0.0096
151	2.8963	0.0096
152	2.9059	0.0096
153	2.9154	0.0095
154	2.9250	0.0095
155	2.9344	0.0095

156	2.9439	0.0095
157	2.9533	0.0094
158	2.9627	0.0094
159	2.9721	0.0094
160	2.9814	0.0093
161	2.9907	0.0093
162	3.0000	0.0093
163	3.0092	0.0092
164	3.0184	0.0092
165	3.0276	0.0092
166	3.0368	0.0092
167	3.0459	0.0091
168	3.0550	0.0091
169	3.0641	0.0091
170	3.0732	0.0091
171	3.0822	0.0090
172	3.0912	0.0090
173	3.1002	0.0090
174	3.1091	0.0089
175	3.1180	0.0089
176	3.1269	0.0089
177	3.1358	0.0089
178	3.1446	0.0088
179	3.1535	0.0088
180	3.1623	0.0088
181	3.1710	0.0088
182	3.1798	0.0087
183	3.1885	0.0087
184	3.1972	0.0087
185	3.2059	0.0087
186	3.2145	0.0087
187	3.2232	0.0086
188	3.2318	0.0086
189	3.2403	0.0086
190	3.2489	0.0086
191	3.2574	0.0085
192	3.2660	0.0085
193	3.2745	0.0085
194	3.2829	0.0085
195	3.2914	0.0085
196	3.2998	0.0084
197	3.3082	0.0084
198	3.3166	0.0084
199	3.3250	0.0084
200	3.3333	0.0083
201	3.3416	0.0083
202	3.3499	0.0083
203	3.3582	0.0083
204	3.3665	0.0083
205	3.3747	0.0082
206	3.3829	0.0082
207	3.3911	0.0082
208	3.3993	0.0082
209	3.4075	0.0082
210	3.4156	0.0081
211	3.4237	0.0081
212	3.4319	0.0081
213	3.4399	0.0081
214	3.4480	0.0081
215	3.4560	0.0080
216	3.4641	0.0080
217	3.4721	0.0080
218	3.4801	0.0080
219	3.4881	0.0080
220	3.4960	0.0080
221	3.5039	0.0079
222	3.5119	0.0079
223	3.5198	0.0079
224	3.5276	0.0079
225	3.5355	0.0079
226	3.5434	0.0078

227	3.5512	0.0078
228	3.5590	0.0078
229	3.5668	0.0078
230	3.5746	0.0078
231	3.5823	0.0078
232	3.5901	0.0077
233	3.5978	0.0077
234	3.6055	0.0077
235	3.6132	0.0077
236	3.6209	0.0077
237	3.6286	0.0077
238	3.6362	0.0076
239	3.6438	0.0076
240	3.6515	0.0076
241	3.6591	0.0076
242	3.6666	0.0076
243	3.6742	0.0076
244	3.6818	0.0076
245	3.6893	0.0075
246	3.6968	0.0075
247	3.7043	0.0075
248	3.7118	0.0075
249	3.7193	0.0075
250	3.7268	0.0075
251	3.7342	0.0074
252	3.7416	0.0074
253	3.7491	0.0074
254	3.7565	0.0074
255	3.7638	0.0074
256	3.7712	0.0074
257	3.7786	0.0074
258	3.7859	0.0073
259	3.7932	0.0073
260	3.8006	0.0073
261	3.8079	0.0073
262	3.8152	0.0073
263	3.8224	0.0073
264	3.8297	0.0073
265	3.8369	0.0072
266	3.8442	0.0072
267	3.8514	0.0072
268	3.8586	0.0072
269	3.8658	0.0072
270	3.8730	0.0072
271	3.8801	0.0072
272	3.8873	0.0072
273	3.8944	0.0071
274	3.9015	0.0071
275	3.9087	0.0071
276	3.9158	0.0071
277	3.9228	0.0071
278	3.9299	0.0071
279	3.9370	0.0071
280	3.9440	0.0070
281	3.9511	0.0070
282	3.9581	0.0070
283	3.9651	0.0070
284	3.9721	0.0070
285	3.9791	0.0070
286	3.9861	0.0070
287	3.9930	0.0070
288	4.0000	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0056	0.0014
2	0.0070	0.0056	0.0014
3	0.0070	0.0056	0.0014
4	0.0070	0.0056	0.0014

5	0.0070	0.0056	0.0014
6	0.0070	0.0056	0.0014
7	0.0071	0.0057	0.0014
8	0.0071	0.0057	0.0014
9	0.0071	0.0057	0.0014
10	0.0071	0.0057	0.0014
11	0.0071	0.0057	0.0014
12	0.0072	0.0057	0.0014
13	0.0072	0.0058	0.0014
14	0.0072	0.0058	0.0014
15	0.0072	0.0058	0.0014
16	0.0072	0.0058	0.0014
17	0.0073	0.0058	0.0014
18	0.0073	0.0058	0.0014
19	0.0073	0.0059	0.0014
20	0.0073	0.0059	0.0014
21	0.0073	0.0059	0.0015
22	0.0074	0.0059	0.0015
23	0.0074	0.0059	0.0015
24	0.0074	0.0059	0.0015
25	0.0074	0.0060	0.0015
26	0.0074	0.0060	0.0015
27	0.0075	0.0060	0.0015
28	0.0075	0.0060	0.0015
29	0.0075	0.0060	0.0015
30	0.0075	0.0060	0.0015
31	0.0076	0.0061	0.0015
32	0.0076	0.0061	0.0015
33	0.0076	0.0061	0.0015
34	0.0076	0.0061	0.0015
35	0.0077	0.0061	0.0015
36	0.0077	0.0062	0.0015
37	0.0077	0.0062	0.0015
38	0.0077	0.0062	0.0015
39	0.0078	0.0062	0.0015
40	0.0078	0.0062	0.0015
41	0.0078	0.0063	0.0015
42	0.0078	0.0063	0.0016
43	0.0079	0.0063	0.0016
44	0.0079	0.0063	0.0016
45	0.0079	0.0064	0.0016
46	0.0079	0.0064	0.0016
47	0.0080	0.0064	0.0016
48	0.0080	0.0064	0.0016
49	0.0080	0.0064	0.0016
50	0.0080	0.0065	0.0016
51	0.0081	0.0065	0.0016
52	0.0081	0.0065	0.0016
53	0.0081	0.0065	0.0016
54	0.0082	0.0065	0.0016
55	0.0082	0.0066	0.0016
56	0.0082	0.0066	0.0016
57	0.0083	0.0066	0.0016
58	0.0083	0.0066	0.0016
59	0.0083	0.0067	0.0016
60	0.0083	0.0067	0.0017
61	0.0084	0.0067	0.0017
62	0.0084	0.0067	0.0017
63	0.0085	0.0068	0.0017
64	0.0085	0.0068	0.0017
65	0.0085	0.0068	0.0017
66	0.0085	0.0068	0.0017
67	0.0086	0.0069	0.0017
68	0.0086	0.0069	0.0017
69	0.0087	0.0069	0.0017
70	0.0087	0.0070	0.0017
71	0.0087	0.0070	0.0017
72	0.0087	0.0070	0.0017
73	0.0088	0.0071	0.0017
74	0.0088	0.0071	0.0017
75	0.0089	0.0071	0.0018

76	0.0089	0.0071	0.0018
77	0.0089	0.0072	0.0018
78	0.0090	0.0072	0.0018
79	0.0090	0.0072	0.0018
80	0.0091	0.0073	0.0018
81	0.0091	0.0073	0.0018
82	0.0091	0.0073	0.0018
83	0.0092	0.0074	0.0018
84	0.0092	0.0074	0.0018
85	0.0093	0.0074	0.0018
86	0.0093	0.0075	0.0018
87	0.0094	0.0075	0.0019
88	0.0094	0.0075	0.0019
89	0.0095	0.0076	0.0019
90	0.0095	0.0076	0.0019
91	0.0095	0.0077	0.0019
92	0.0096	0.0077	0.0019
93	0.0096	0.0077	0.0019
94	0.0097	0.0078	0.0019
95	0.0097	0.0078	0.0019
96	0.0098	0.0078	0.0019
97	0.0098	0.0079	0.0019
98	0.0099	0.0079	0.0020
99	0.0099	0.0080	0.0020
100	0.0100	0.0080	0.0020
101	0.0101	0.0081	0.0020
102	0.0101	0.0081	0.0020
103	0.0102	0.0081	0.0020
104	0.0102	0.0082	0.0020
105	0.0103	0.0082	0.0020
106	0.0103	0.0083	0.0020
107	0.0104	0.0083	0.0021
108	0.0104	0.0084	0.0021
109	0.0105	0.0084	0.0021
110	0.0106	0.0085	0.0021
111	0.0106	0.0085	0.0021
112	0.0107	0.0086	0.0021
113	0.0108	0.0086	0.0021
114	0.0108	0.0087	0.0021
115	0.0109	0.0088	0.0022
116	0.0110	0.0088	0.0022
117	0.0111	0.0089	0.0022
118	0.0111	0.0089	0.0022
119	0.0112	0.0090	0.0022
120	0.0113	0.0090	0.0022
121	0.0114	0.0091	0.0023
122	0.0114	0.0092	0.0023
123	0.0115	0.0092	0.0023
124	0.0116	0.0093	0.0023
125	0.0117	0.0094	0.0023
126	0.0118	0.0094	0.0023
127	0.0119	0.0095	0.0024
128	0.0119	0.0096	0.0024
129	0.0121	0.0097	0.0024
130	0.0121	0.0097	0.0024
131	0.0123	0.0098	0.0024
132	0.0123	0.0099	0.0024
133	0.0125	0.0100	0.0025
134	0.0125	0.0100	0.0025
135	0.0127	0.0102	0.0025
136	0.0127	0.0102	0.0025
137	0.0129	0.0103	0.0026
138	0.0130	0.0104	0.0026
139	0.0131	0.0105	0.0026
140	0.0132	0.0106	0.0026
141	0.0134	0.0107	0.0027
142	0.0135	0.0108	0.0027
143	0.0137	0.0110	0.0027
144	0.0137	0.0110	0.0027
145	0.0175	0.0140	0.0035
146	0.0175	0.0141	0.0035

147	0.0177	0.0142	0.0035
148	0.0178	0.0143	0.0035
149	0.0180	0.0145	0.0036
150	0.0181	0.0145	0.0036
151	0.0184	0.0147	0.0036
152	0.0185	0.0148	0.0037
153	0.0187	0.0150	0.0037
154	0.0188	0.0151	0.0037
155	0.0191	0.0153	0.0038
156	0.0192	0.0154	0.0038
157	0.0195	0.0156	0.0039
158	0.0196	0.0157	0.0039
159	0.0199	0.0159	0.0039
160	0.0200	0.0161	0.0040
161	0.0203	0.0163	0.0040
162	0.0205	0.0164	0.0041
163	0.0208	0.0167	0.0041
164	0.0210	0.0169	0.0042
165	0.0214	0.0172	0.0042
166	0.0216	0.0173	0.0043
167	0.0220	0.0176	0.0044
168	0.0222	0.0178	0.0044
169	0.0227	0.0182	0.0045
170	0.0229	0.0184	0.0045
171	0.0234	0.0188	0.0046
172	0.0237	0.0190	0.0047
173	0.0243	0.0195	0.0048
174	0.0246	0.0197	0.0049
175	0.0253	0.0203	0.0050
176	0.0257	0.0206	0.0051
177	0.0264	0.0212	0.0052
178	0.0269	0.0216	0.0053
179	0.0278	0.0223	0.0055
180	0.0284	0.0227	0.0056
181	0.0295	0.0237	0.0058
182	0.0302	0.0242	0.0060
183	0.0317	0.0254	0.0063
184	0.0325	0.0261	0.0064
185	0.0168	0.0134	0.0033
186	0.0179	0.0143	0.0035
187	0.0207	0.0166	0.0041
188	0.0226	0.0181	0.0045
189	0.0281	0.0226	0.0056
190	0.0324	0.0260	0.0064
191	0.0491	0.0394	0.0097
192	0.0713	0.0559	0.0154
193	0.3086	0.0559	0.2527
194	0.0387	0.0310	0.0077
195	0.0250	0.0201	0.0050
196	0.0192	0.0154	0.0038
197	0.0335	0.0268	0.0066
198	0.0309	0.0248	0.0061
199	0.0289	0.0232	0.0057
200	0.0273	0.0219	0.0054
201	0.0260	0.0209	0.0052
202	0.0249	0.0200	0.0049
203	0.0240	0.0192	0.0048
204	0.0232	0.0186	0.0046
205	0.0224	0.0180	0.0044
206	0.0218	0.0175	0.0043
207	0.0212	0.0170	0.0042
208	0.0207	0.0166	0.0041
209	0.0202	0.0162	0.0040
210	0.0197	0.0158	0.0039
211	0.0193	0.0155	0.0038
212	0.0189	0.0152	0.0037
213	0.0186	0.0149	0.0037
214	0.0182	0.0146	0.0036
215	0.0179	0.0144	0.0036
216	0.0176	0.0141	0.0035
217	0.0138	0.0111	0.0027

218	0.0136	0.0109	0.0027
219	0.0133	0.0107	0.0026
220	0.0131	0.0105	0.0026
221	0.0128	0.0103	0.0025
222	0.0126	0.0101	0.0025
223	0.0124	0.0099	0.0025
224	0.0122	0.0098	0.0024
225	0.0120	0.0096	0.0024
226	0.0118	0.0095	0.0023
227	0.0116	0.0093	0.0023
228	0.0115	0.0092	0.0023
229	0.0113	0.0091	0.0022
230	0.0112	0.0090	0.0022
231	0.0110	0.0088	0.0022
232	0.0109	0.0087	0.0022
233	0.0107	0.0086	0.0021
234	0.0106	0.0085	0.0021
235	0.0105	0.0084	0.0021
236	0.0104	0.0083	0.0021
237	0.0102	0.0082	0.0020
238	0.0101	0.0081	0.0020
239	0.0100	0.0080	0.0020
240	0.0099	0.0079	0.0020
241	0.0098	0.0079	0.0019
242	0.0097	0.0078	0.0019
243	0.0096	0.0077	0.0019
244	0.0095	0.0076	0.0019
245	0.0094	0.0076	0.0019
246	0.0093	0.0075	0.0018
247	0.0092	0.0074	0.0018
248	0.0092	0.0073	0.0018
249	0.0091	0.0073	0.0018
250	0.0090	0.0072	0.0018
251	0.0089	0.0072	0.0018
252	0.0088	0.0071	0.0018
253	0.0088	0.0070	0.0017
254	0.0087	0.0070	0.0017
255	0.0086	0.0069	0.0017
256	0.0086	0.0069	0.0017
257	0.0085	0.0068	0.0017
258	0.0084	0.0068	0.0017
259	0.0084	0.0067	0.0017
260	0.0083	0.0067	0.0016
261	0.0082	0.0066	0.0016
262	0.0082	0.0066	0.0016
263	0.0081	0.0065	0.0016
264	0.0081	0.0065	0.0016
265	0.0080	0.0064	0.0016
266	0.0080	0.0064	0.0016
267	0.0079	0.0063	0.0016
268	0.0078	0.0063	0.0016
269	0.0078	0.0063	0.0015
270	0.0077	0.0062	0.0015
271	0.0077	0.0062	0.0015
272	0.0076	0.0061	0.0015
273	0.0076	0.0061	0.0015
274	0.0076	0.0061	0.0015
275	0.0075	0.0060	0.0015
276	0.0075	0.0060	0.0015
277	0.0074	0.0059	0.0015
278	0.0074	0.0059	0.0015
279	0.0073	0.0059	0.0015
280	0.0073	0.0058	0.0014
281	0.0072	0.0058	0.0014
282	0.0072	0.0058	0.0014
283	0.0072	0.0057	0.0014
284	0.0071	0.0057	0.0014
285	0.0071	0.0057	0.0014
286	0.0070	0.0057	0.0014
287	0.0070	0.0056	0.0014
288	0.0070	0.0056	0.0014

```
      ----------------------------------------------------------------------
      ----------------------------------------------------------------------
      Total soil rain loss =      3.02(In)
      Total effective rainfall =      0.98(In)
      Peak flow rate in flood hydrograph =      4.98(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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      0.00  Q          |         |         |         |
  0+10       0.0002      0.02  Q          |         |         |         |
  0+15       0.0005      0.05  Q          |         |         |         |
  0+20       0.0009      0.06  Q          |         |         |         |
  0+25       0.0014      0.06  Q          |         |         |         |
  0+30       0.0019      0.07  Q          |         |         |         |
  0+35       0.0024      0.07  Q          |         |         |         |
  0+40       0.0028      0.07  Q          |         |         |         |
  0+45       0.0033      0.07  Q          |         |         |         |
  0+50       0.0038      0.07  Q          |         |         |         |
  0+55       0.0043      0.07  Q          |         |         |         |
  1+ 0       0.0049      0.07  Q          |         |         |         |
  1+ 5       0.0054      0.07  Q          |         |         |         |
  1+10       0.0059      0.07  Q          |         |         |         |
  1+15       0.0064      0.07  Q          |         |         |         |
  1+20       0.0069      0.07  Q          |         |         |         |
  1+25       0.0074      0.07  Q          |         |         |         |
  1+30       0.0079      0.07  Q          |         |         |         |
  1+35       0.0085      0.08  Q          |         |         |         |
  1+40       0.0090      0.08  QV         |         |         |         |
  1+45       0.0095      0.08  QV         |         |         |         |
  1+50       0.0100      0.08  QV         |         |         |         |
  1+55       0.0105      0.08  QV         |         |         |         |
  2+ 0       0.0111      0.08  QV         |         |         |         |
  2+ 5       0.0116      0.08  QV         |         |         |         |
  2+10       0.0121      0.08  QV         |         |         |         |
  2+15       0.0126      0.08  QV         |         |         |         |
  2+20       0.0132      0.08  QV         |         |         |         |
  2+25       0.0137      0.08  QV         |         |         |         |
  2+30       0.0142      0.08  QV         |         |         |         |
  2+35       0.0148      0.08  QV         |         |         |         |
  2+40       0.0153      0.08  QV         |         |         |         |
  2+45       0.0159      0.08  QV         |         |         |         |
  2+50       0.0164      0.08  QV         |         |         |         |
  2+55       0.0169      0.08  QV         |         |         |         |
  3+ 0       0.0175      0.08  QV         |         |         |         |
  3+ 5       0.0180      0.08  Q V        |         |         |         |
  3+10       0.0186      0.08  Q V        |         |         |         |
  3+15       0.0191      0.08  Q V        |         |         |         |
  3+20       0.0197      0.08  Q V        |         |         |         |
  3+25       0.0202      0.08  Q V        |         |         |         |
  3+30       0.0208      0.08  Q V        |         |         |         |
  3+35       0.0214      0.08  Q V        |         |         |         |
  3+40       0.0219      0.08  Q V        |         |         |         |
  3+45       0.0225      0.08  Q V        |         |         |         |
  3+50       0.0230      0.08  Q V        |         |         |         |
  3+55       0.0236      0.08  Q V        |         |         |         |
  4+ 0       0.0242      0.08  Q V        |         |         |         |
  4+ 5       0.0247      0.08  Q V        |         |         |         |
  4+10       0.0253      0.08  Q V        |         |         |         |
  4+15       0.0259      0.08  Q V        |         |         |         |
  4+20       0.0265      0.08  Q V        |         |         |         |
  4+25       0.0270      0.08  Q  V       |         |         |         |
  4+30       0.0276      0.08  Q  V       |         |         |         |
  4+35       0.0282      0.08  Q  V       |         |         |         |
  4+40       0.0288      0.08  Q  V       |         |         |         |
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4+45	0.0294	0.08	Q	V				
4+50	0.0299	0.09	Q	V				
4+55	0.0305	0.09	Q	V				
5+ 0	0.0311	0.09	Q	V				
5+ 5	0.0317	0.09	Q	V				
5+10	0.0323	0.09	Q	V				
5+15	0.0329	0.09	Q	V				
5+20	0.0335	0.09	Q	V				
5+25	0.0341	0.09	Q	V				
5+30	0.0347	0.09	Q	V				
5+35	0.0353	0.09	Q	V				
5+40	0.0359	0.09	Q	V				
5+45	0.0365	0.09	Q	V				
5+50	0.0372	0.09	Q	V				
5+55	0.0378	0.09	Q	V				
6+ 0	0.0384	0.09	Q	V				
6+ 5	0.0390	0.09	Q	V				
6+10	0.0396	0.09	Q	V				
6+15	0.0403	0.09	Q	V				
6+20	0.0409	0.09	Q	V				
6+25	0.0415	0.09	Q	V				
6+30	0.0422	0.09	Q	V				
6+35	0.0428	0.09	Q	V				
6+40	0.0434	0.09	Q	V				
6+45	0.0441	0.09	Q	V				
6+50	0.0447	0.09	Q	V				
6+55	0.0454	0.09	Q	V				
7+ 0	0.0460	0.09	Q	V				
7+ 5	0.0467	0.10	Q	V				
7+10	0.0473	0.10	Q	V				
7+15	0.0480	0.10	Q	V				
7+20	0.0487	0.10	Q	V				
7+25	0.0493	0.10	Q	V				
7+30	0.0500	0.10	Q	V				
7+35	0.0507	0.10	Q	V				
7+40	0.0514	0.10	Q	V				
7+45	0.0520	0.10	Q	V				
7+50	0.0527	0.10	Q	V				
7+55	0.0534	0.10	Q	V				
8+ 0	0.0541	0.10	Q	V				
8+ 5	0.0548	0.10	Q	V				
8+10	0.0555	0.10	Q	V				
8+15	0.0562	0.10	Q	V				
8+20	0.0569	0.10	Q	V				
8+25	0.0576	0.10	Q	V				
8+30	0.0583	0.10	Q	V				
8+35	0.0590	0.10	Q	V				
8+40	0.0597	0.10	Q	V				
8+45	0.0605	0.11	Q	V				
8+50	0.0612	0.11	Q	V				
8+55	0.0619	0.11	Q	V				
9+ 0	0.0627	0.11	Q	V				
9+ 5	0.0634	0.11	Q	V				
9+10	0.0642	0.11	Q	V				
9+15	0.0649	0.11	Q	V				
9+20	0.0657	0.11	Q	V				
9+25	0.0664	0.11	Q	V				
9+30	0.0672	0.11	Q	V				
9+35	0.0679	0.11	Q	V				
9+40	0.0687	0.11	Q	V				
9+45	0.0695	0.11	Q	V				
9+50	0.0703	0.11	Q	V				
9+55	0.0711	0.11	Q	V				
10+ 0	0.0719	0.12	Q	V				
10+ 5	0.0727	0.12	Q	V				
10+10	0.0735	0.12	Q	V				
10+15	0.0743	0.12	Q	V				
10+20	0.0751	0.12	Q	V				
10+25	0.0759	0.12	Q	V				
10+30	0.0767	0.12	Q	V				
10+35	0.0776	0.12	Q	V				

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10+40       0.0784      0.12  Q       V |          |          |          |
10+45       0.0792      0.12  Q       V |          |          |          |
10+50       0.0801      0.12  Q        V|          |          |          |
10+55       0.0810      0.12  Q        V|          |          |          |
11+ 0       0.0818      0.13  Q        V|          |          |          |
11+ 5       0.0827      0.13  Q        V|          |          |          |
11+10       0.0836      0.13  Q        V|          |          |          |
11+15       0.0845      0.13  Q        V|          |          |          |
11+20       0.0854      0.13  Q        V|          |          |          |
11+25       0.0863      0.13  Q        V|          |          |          |
11+30       0.0872      0.13  Q        V|          |          |          |
11+35       0.0881      0.13  Q        V|          |          |          |
11+40       0.0890      0.13  Q         V          |          |          |
11+45       0.0899      0.14  Q         V          |          |          |
11+50       0.0909      0.14  Q         V          |          |          |
11+55       0.0918      0.14  Q         V          |          |          |
12+ 0       0.0928      0.14  Q         V          |          |          |
12+ 5       0.0938      0.14  Q         V          |          |          |
12+10       0.0948      0.15  Q         V          |          |          |
12+15       0.0960      0.17  Q         V          |          |          |
12+20       0.0972      0.18  Q         V          |          |          |
12+25       0.0985      0.18  Q         |V         |          |          |
12+30       0.0997      0.18  Q         |V         |          |          |
12+35       0.1010      0.19  Q         |V         |          |          |
12+40       0.1023      0.19  Q         |V         |          |          |
12+45       0.1036      0.19  Q         |V         |          |          |
12+50       0.1049      0.19  Q         |V         |          |          |
12+55       0.1062      0.19  Q         |V         |          |          |
13+ 0       0.1076      0.19  Q         | V        |          |          |
13+ 5       0.1089      0.20  Q         | V        |          |          |
13+10       0.1103      0.20  Q         | V        |          |          |
13+15       0.1117      0.20  Q         | V        |          |          |
13+20       0.1131      0.20  Q         | V        |          |          |
13+25       0.1145      0.21  Q         | V        |          |          |
13+30       0.1159      0.21  Q         |  V       |          |          |
13+35       0.1174      0.21  Q         |  V       |          |          |
13+40       0.1188      0.21  Q         |  V       |          |          |
13+45       0.1203      0.21  Q         |  V       |          |          |
13+50       0.1218      0.22  Q         |  V       |          |          |
13+55       0.1233      0.22  Q         |  V       |          |          |
14+ 0       0.1249      0.22  Q         |   V      |          |          |
14+ 5       0.1264      0.23  Q         |   V      |          |          |
14+10       0.1280      0.23  Q         |   V      |          |          |
14+15       0.1296      0.23  Q         |   V      |          |          |
14+20       0.1312      0.24  Q         |   V      |          |          |
14+25       0.1329      0.24  Q         |   V      |          |          |
14+30       0.1346      0.25  Q         |    V     |          |          |
14+35       0.1363      0.25  |Q        |    V     |          |          |
14+40       0.1381      0.25  |Q        |    V     |          |          |
14+45       0.1399      0.26  |Q        |    V     |          |          |
14+50       0.1417      0.27  |Q        |    V     |          |          |
14+55       0.1436      0.27  |Q        |     V    |          |          |
15+ 0       0.1455      0.28  |Q        |     V    |          |          |
15+ 5       0.1475      0.29  |Q        |     V    |          |          |
15+10       0.1495      0.29  |Q        |     V    |          |          |
15+15       0.1516      0.30  |Q        |      V   |          |          |
15+20       0.1537      0.31  |Q        |      V   |          |          |
15+25       0.1559      0.31  |Q        |      V   |          |          |
15+30       0.1578      0.28  |Q        |      V   |          |          |
15+35       0.1593      0.23  Q         |      V   |          |          |
15+40       0.1608      0.22  Q         |       V  |          |          |
15+45       0.1624      0.23  Q         |       V  |          |          |
15+50       0.1642      0.25  |Q        |       V  |          |          |
15+55       0.1662      0.30  |Q        |       V  |          |          |
16+ 0       0.1688      0.38  |Q        |        V |          |          |
16+ 5       0.1770      1.19  |   Q     |        V |          |          |
16+10       0.2060      4.21  |         |     Q    |  V       |          |
16+15       0.2404      4.98  |         |        Q |      V   |          |
16+20       0.2544      2.04  |       Q |          |       V  |          |
16+25       0.2631      1.26  |    Q    |          |        V |          |
16+30       0.2693      0.90  |  Q      |          |         V|          |
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16+35       0.2739      0.67  | Q       |         |         V         |
16+40       0.2772      0.47  |Q        |         |         |V        |
16+45       0.2798      0.38  |Q        |         |         |V        |
16+50       0.2821      0.34  |Q        |         |         |V        |
16+55       0.2844      0.33  |Q        |         |         | V       |
17+ 0       0.2864      0.29  |Q        |         |         | V       |
17+ 5       0.2882      0.26  |Q        |         |         | V       |
17+10       0.2899      0.24  Q         |         |         | V       |
17+15       0.2915      0.24  Q         |         |         | V       |
17+20       0.2931      0.23  Q         |         |         |  V      |
17+25       0.2946      0.22  Q         |         |         |  V      |
17+30       0.2961      0.22  Q         |         |         |  V      |
17+35       0.2976      0.21  Q         |         |         |  V      |
17+40       0.2990      0.21  Q         |         |         |  V      |
17+45       0.3004      0.20  Q         |         |         |  V      |
17+50       0.3018      0.20  Q         |         |         |  V      |
17+55       0.3031      0.19  Q         |         |         |   V     |
18+ 0       0.3044      0.19  Q         |         |         |   V     |
18+ 5       0.3057      0.19  Q         |         |         |   V     |
18+10       0.3069      0.17  Q         |         |         |   V     |
18+15       0.3080      0.16  Q         |         |         |   V     |
18+20       0.3090      0.15  Q         |         |         |   V     |
18+25       0.3100      0.14  Q         |         |         |   V     |
18+30       0.3109      0.14  Q         |         |         |    V    |
18+35       0.3118      0.14  Q         |         |         |    V    |
18+40       0.3128      0.13  Q         |         |         |    V    |
18+45       0.3136      0.13  Q         |         |         |    V    |
18+50       0.3145      0.13  Q         |         |         |    V    |
18+55       0.3154      0.13  Q         |         |         |    V    |
19+ 0       0.3162      0.12  Q         |         |         |    V    |
19+ 5       0.3171      0.12  Q         |         |         |    V    |
19+10       0.3179      0.12  Q         |         |         |    V    |
19+15       0.3187      0.12  Q         |         |         |    V    |
19+20       0.3195      0.12  Q         |         |         |    V    |
19+25       0.3203      0.11  Q         |         |         |     V   |
19+30       0.3211      0.11  Q         |         |         |     V   |
19+35       0.3219      0.11  Q         |         |         |     V   |
19+40       0.3226      0.11  Q         |         |         |     V   |
19+45       0.3234      0.11  Q         |         |         |     V   |
19+50       0.3241      0.11  Q         |         |         |     V   |
19+55       0.3248      0.11  Q         |         |         |     V   |
20+ 0       0.3256      0.11  Q         |         |         |     V   |
20+ 5       0.3263      0.10  Q         |         |         |     V   |
20+10       0.3270      0.10  Q         |         |         |     V   |
20+15       0.3277      0.10  Q         |         |         |     V   |
20+20       0.3284      0.10  Q         |         |         |     V   |
20+25       0.3291      0.10  Q         |         |         |      V  |
20+30       0.3298      0.10  Q         |         |         |      V  |
20+35       0.3304      0.10  Q         |         |         |      V  |
20+40       0.3311      0.10  Q         |         |         |      V  |
20+45       0.3318      0.10  Q         |         |         |      V  |
20+50       0.3324      0.10  Q         |         |         |      V  |
20+55       0.3331      0.09  Q         |         |         |      V  |
21+ 0       0.3337      0.09  Q         |         |         |      V  |
21+ 5       0.3344      0.09  Q         |         |         |      V  |
21+10       0.3350      0.09  Q         |         |         |      V  |
21+15       0.3356      0.09  Q         |         |         |      V  |
21+20       0.3363      0.09  Q         |         |         |      V  |
21+25       0.3369      0.09  Q         |         |         |      V  |
21+30       0.3375      0.09  Q         |         |         |       V |
21+35       0.3381      0.09  Q         |         |         |       V |
21+40       0.3387      0.09  Q         |         |         |       V |
21+45       0.3393      0.09  Q         |         |         |       V |
21+50       0.3399      0.09  Q         |         |         |       V |
21+55       0.3405      0.09  Q         |         |         |       V |
22+ 0       0.3411      0.09  Q         |         |         |       V |
22+ 5       0.3416      0.08  Q         |         |         |       V |
22+10       0.3422      0.08  Q         |         |         |       V |
22+15       0.3428      0.08  Q         |         |         |       V |
22+20       0.3434      0.08  Q         |         |         |       V |
22+25       0.3439      0.08  Q         |         |         |       V |
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   22+30       0.3445      0.08  Q          |          |          |        V |
   22+35       0.3451      0.08  Q          |          |          |        V |
   22+40       0.3456      0.08  Q          |          |          |        V |
   22+45       0.3462      0.08  Q          |          |          |        V |
   22+50       0.3467      0.08  Q          |          |          |         V|
   22+55       0.3472      0.08  Q          |          |          |         V|
   23+ 0       0.3478      0.08  Q          |          |          |         V|
   23+ 5       0.3483      0.08  Q          |          |          |         V|
   23+10       0.3489      0.08  Q          |          |          |         V|
   23+15       0.3494      0.08  Q          |          |          |         V|
   23+20       0.3499      0.08  Q          |          |          |         V|
   23+25       0.3504      0.08  Q          |          |          |         V|
   23+30       0.3510      0.08  Q          |          |          |         V|
   23+35       0.3515      0.08  Q          |          |          |         V|
   23+40       0.3520      0.07  Q          |          |          |         V|
   23+45       0.3525      0.07  Q          |          |          |         V|
   23+50       0.3530      0.07  Q          |          |          |         V|
   23+55       0.3535      0.07  Q          |          |          |         V|
   24+ 0       0.3540      0.07  Q          |          |          |         V|
   24+ 5       0.3545      0.07  Q          |          |          |         V|
   24+10       0.3548      0.05  Q          |          |          |         V|
   24+15       0.3550      0.02  Q          |          |          |         V|
   24+20       0.3551      0.01  Q          |          |          |         V|
   24+25       0.3551      0.01  Q          |          |          |         V|
   24+30       0.3552      0.00  Q          |          |          |         V|
   24+35       0.3552      0.00  Q          |          |          |         V|
   24+40       0.3552      0.00  Q          |          |          |         V|
   24+45       0.3552      0.00  Q          |          |          |         V|
   24+50       0.3552      0.00  Q          |          |          |         V|
   24+55       0.3552      0.00  Q          |          |          |         V|
   25+ 0       0.3552      0.00  Q          |          |          |         V|
-------------------------------------------------------------------------
```

Area 'B' – 5 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
5 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             4.33            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      60.6          4.33      1.000     0.671    1.000    0.671

Area-averaged adjusted loss rate Fm (In/Hr) =  0.671

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
4.33	1.000	78.0	60.6	6.50	0.322

Area-averaged catchment yield fraction, Y = 0.322
Area-averaged low loss fraction, Yb = 0.678
User entry of time of concentration = 0.182 (hours)
++
Watershed area = 4.33(Ac.)
Catchment Lag time = 0.146 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 57.2344
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.671(In/Hr)
Average low loss rate fraction (Yb) = 0.678 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 4.33(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.403(In)
30-minute factor = 1.000 Adjusted rainfall = 0.690(In)
1-hour factor = 1.000 Adjusted rainfall = 0.849(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.586(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 52.37 (CFS))	
1	5.210	2.728
2	33.842	14.993
3	69.240	18.537
4	82.158	6.765
5	89.615	3.905
6	94.272	2.439
7	97.009	1.433
8	98.250	0.650
9	98.857	0.318
10	99.271	0.217
11	99.677	0.213
12	99.909	0.121
13	100.000	0.048

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4030	0.4030
2	0.4962	0.0932
3	0.5603	0.0642
4	0.6108	0.0505
5	0.6531	0.0423
6	0.6899	0.0367
7	0.7225	0.0327
8	0.7520	0.0295
9	0.7791	0.0270
10	0.8041	0.0250
11	0.8274	0.0233
12	0.8493	0.0219
13	0.8926	0.0433

14	0.9347	0.0421
15	0.9756	0.0409
16	1.0156	0.0399
17	1.0545	0.0390
18	1.0927	0.0381
19	1.1300	0.0373
20	1.1666	0.0366
21	1.2025	0.0359
22	1.2378	0.0353
23	1.2724	0.0347
24	1.3065	0.0341
25	1.3401	0.0336
26	1.3732	0.0331
27	1.4057	0.0326
28	1.4379	0.0321
29	1.4696	0.0317
30	1.5009	0.0313
31	1.5317	0.0309
32	1.5623	0.0305
33	1.5924	0.0302
34	1.6222	0.0298
35	1.6517	0.0295
36	1.6809	0.0292
37	1.7097	0.0289
38	1.7383	0.0286
39	1.7666	0.0283
40	1.7946	0.0280
41	1.8223	0.0277
42	1.8498	0.0275
43	1.8771	0.0272
44	1.9041	0.0270
45	1.9308	0.0268
46	1.9574	0.0265
47	1.9837	0.0263
48	2.0098	0.0261
49	2.0357	0.0259
50	2.0614	0.0257
51	2.0869	0.0255
52	2.1123	0.0253
53	2.1374	0.0251
54	2.1624	0.0250
55	2.1872	0.0248
56	2.2118	0.0246
57	2.2362	0.0245
58	2.2605	0.0243
59	2.2847	0.0241
60	2.3087	0.0240
61	2.3325	0.0238
62	2.3562	0.0237
63	2.3797	0.0235
64	2.4031	0.0234
65	2.4264	0.0233
66	2.4495	0.0231
67	2.4725	0.0230
68	2.4953	0.0229
69	2.5181	0.0227
70	2.5407	0.0226
71	2.5632	0.0225
72	2.5855	0.0224
73	2.6067	0.0212
74	2.6278	0.0211
75	2.6488	0.0210
76	2.6696	0.0208
77	2.6903	0.0207
78	2.7110	0.0206
79	2.7315	0.0205
80	2.7519	0.0204
81	2.7722	0.0203
82	2.7924	0.0202
83	2.8125	0.0201
84	2.8325	0.0200

85	2.8524	0.0199
86	2.8723	0.0198
87	2.8920	0.0197
88	2.9116	0.0196
89	2.9312	0.0195
90	2.9506	0.0194
91	2.9700	0.0194
92	2.9892	0.0193
93	3.0084	0.0192
94	3.0275	0.0191
95	3.0466	0.0190
96	3.0655	0.0189
97	3.0844	0.0189
98	3.1031	0.0188
99	3.1219	0.0187
100	3.1405	0.0186
101	3.1590	0.0186
102	3.1775	0.0185
103	3.1959	0.0184
104	3.2142	0.0183
105	3.2325	0.0183
106	3.2507	0.0182
107	3.2688	0.0181
108	3.2868	0.0180
109	3.3048	0.0180
110	3.3227	0.0179
111	3.3406	0.0178
112	3.3584	0.0178
113	3.3761	0.0177
114	3.3937	0.0177
115	3.4113	0.0176
116	3.4289	0.0175
117	3.4463	0.0175
118	3.4637	0.0174
119	3.4811	0.0173
120	3.4984	0.0173
121	3.5156	0.0172
122	3.5328	0.0172
123	3.5499	0.0171
124	3.5669	0.0171
125	3.5839	0.0170
126	3.6009	0.0169
127	3.6177	0.0169
128	3.6346	0.0168
129	3.6514	0.0168
130	3.6681	0.0167
131	3.6848	0.0167
132	3.7014	0.0166
133	3.7180	0.0166
134	3.7345	0.0165
135	3.7510	0.0165
136	3.7674	0.0164
137	3.7838	0.0164
138	3.8001	0.0163
139	3.8163	0.0163
140	3.8326	0.0162
141	3.8488	0.0162
142	3.8649	0.0161
143	3.8810	0.0161
144	3.8970	0.0160
145	3.9130	0.0160
146	3.9290	0.0160
147	3.9449	0.0159
148	3.9607	0.0159
149	3.9766	0.0158
150	3.9923	0.0158
151	4.0081	0.0157
152	4.0238	0.0157
153	4.0394	0.0156
154	4.0550	0.0156
155	4.0706	0.0156

156	4.0861	0.0155
157	4.1016	0.0155
158	4.1170	0.0154
159	4.1324	0.0154
160	4.1478	0.0154
161	4.1631	0.0153
162	4.1784	0.0153
163	4.1937	0.0152
164	4.2089	0.0152
165	4.2240	0.0152
166	4.2392	0.0151
167	4.2543	0.0151
168	4.2693	0.0151
169	4.2844	0.0150
170	4.2993	0.0150
171	4.3143	0.0150
172	4.3292	0.0149
173	4.3441	0.0149
174	4.3589	0.0148
175	4.3737	0.0148
176	4.3885	0.0148
177	4.4033	0.0147
178	4.4180	0.0147
179	4.4326	0.0147
180	4.4473	0.0146
181	4.4619	0.0146
182	4.4765	0.0146
183	4.4910	0.0145
184	4.5055	0.0145
185	4.5200	0.0145
186	4.5344	0.0144
187	4.5489	0.0144
188	4.5632	0.0144
189	4.5776	0.0144
190	4.5919	0.0143
191	4.6062	0.0143
192	4.6205	0.0143
193	4.6347	0.0142
194	4.6489	0.0142
195	4.6631	0.0142
196	4.6772	0.0141
197	4.6913	0.0141
198	4.7054	0.0141
199	4.7194	0.0141
200	4.7335	0.0140
201	4.7475	0.0140
202	4.7614	0.0140
203	4.7754	0.0139
204	4.7893	0.0139
205	4.8032	0.0139
206	4.8170	0.0139
207	4.8308	0.0138
208	4.8446	0.0138
209	4.8584	0.0138
210	4.8722	0.0137
211	4.8859	0.0137
212	4.8996	0.0137
213	4.9132	0.0137
214	4.9269	0.0136
215	4.9405	0.0136
216	4.9541	0.0136
217	4.9676	0.0136
218	4.9812	0.0135
219	4.9947	0.0135
220	5.0082	0.0135
221	5.0216	0.0135
222	5.0351	0.0134
223	5.0485	0.0134
224	5.0619	0.0134
225	5.0752	0.0134
226	5.0886	0.0133

227	5.1019	0.0133
228	5.1152	0.0133
229	5.1285	0.0133
230	5.1417	0.0132
231	5.1549	0.0132
232	5.1681	0.0132
233	5.1813	0.0132
234	5.1945	0.0132
235	5.2076	0.0131
236	5.2207	0.0131
237	5.2338	0.0131
238	5.2468	0.0131
239	5.2599	0.0130
240	5.2729	0.0130
241	5.2859	0.0130
242	5.2988	0.0130
243	5.3118	0.0129
244	5.3247	0.0129
245	5.3376	0.0129
246	5.3505	0.0129
247	5.3634	0.0129
248	5.3762	0.0128
249	5.3890	0.0128
250	5.4018	0.0128
251	5.4146	0.0128
252	5.4274	0.0128
253	5.4401	0.0127
254	5.4528	0.0127
255	5.4655	0.0127
256	5.4782	0.0127
257	5.4909	0.0127
258	5.5035	0.0126
259	5.5161	0.0126
260	5.5287	0.0126
261	5.5413	0.0126
262	5.5538	0.0126
263	5.5664	0.0125
264	5.5789	0.0125
265	5.5914	0.0125
266	5.6039	0.0125
267	5.6163	0.0125
268	5.6288	0.0124
269	5.6412	0.0124
270	5.6536	0.0124
271	5.6660	0.0124
272	5.6784	0.0124
273	5.6907	0.0123
274	5.7030	0.0123
275	5.7153	0.0123
276	5.7276	0.0123
277	5.7399	0.0123
278	5.7522	0.0123
279	5.7644	0.0122
280	5.7766	0.0122
281	5.7888	0.0122
282	5.8010	0.0122
283	5.8132	0.0122
284	5.8253	0.0121
285	5.8375	0.0121
286	5.8496	0.0121
287	5.8617	0.0121
288	5.8738	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0082	0.0039
2	0.0121	0.0082	0.0039
3	0.0121	0.0082	0.0039
4	0.0121	0.0082	0.0039

5	0.0122	0.0083	0.0039
6	0.0122	0.0083	0.0039
7	0.0122	0.0083	0.0039
8	0.0123	0.0083	0.0039
9	0.0123	0.0083	0.0040
10	0.0123	0.0084	0.0040
11	0.0123	0.0084	0.0040
12	0.0124	0.0084	0.0040
13	0.0124	0.0084	0.0040
14	0.0124	0.0084	0.0040
15	0.0125	0.0085	0.0040
16	0.0125	0.0085	0.0040
17	0.0125	0.0085	0.0040
18	0.0125	0.0085	0.0040
19	0.0126	0.0085	0.0040
20	0.0126	0.0085	0.0041
21	0.0126	0.0086	0.0041
22	0.0127	0.0086	0.0041
23	0.0127	0.0086	0.0041
24	0.0127	0.0086	0.0041
25	0.0128	0.0087	0.0041
26	0.0128	0.0087	0.0041
27	0.0128	0.0087	0.0041
28	0.0128	0.0087	0.0041
29	0.0129	0.0087	0.0041
30	0.0129	0.0088	0.0041
31	0.0129	0.0088	0.0042
32	0.0130	0.0088	0.0042
33	0.0130	0.0088	0.0042
34	0.0130	0.0088	0.0042
35	0.0131	0.0089	0.0042
36	0.0131	0.0089	0.0042
37	0.0132	0.0089	0.0042
38	0.0132	0.0089	0.0042
39	0.0132	0.0090	0.0043
40	0.0132	0.0090	0.0043
41	0.0133	0.0090	0.0043
42	0.0133	0.0090	0.0043
43	0.0134	0.0091	0.0043
44	0.0134	0.0091	0.0043
45	0.0134	0.0091	0.0043
46	0.0135	0.0091	0.0043
47	0.0135	0.0092	0.0043
48	0.0135	0.0092	0.0044
49	0.0136	0.0092	0.0044
50	0.0136	0.0092	0.0044
51	0.0137	0.0093	0.0044
52	0.0137	0.0093	0.0044
53	0.0137	0.0093	0.0044
54	0.0138	0.0093	0.0044
55	0.0138	0.0094	0.0044
56	0.0139	0.0094	0.0045
57	0.0139	0.0094	0.0045
58	0.0139	0.0095	0.0045
59	0.0140	0.0095	0.0045
60	0.0140	0.0095	0.0045
61	0.0141	0.0096	0.0045
62	0.0141	0.0096	0.0045
63	0.0142	0.0096	0.0046
64	0.0142	0.0096	0.0046
65	0.0143	0.0097	0.0046
66	0.0143	0.0097	0.0046
67	0.0144	0.0097	0.0046
68	0.0144	0.0098	0.0046
69	0.0144	0.0098	0.0046
70	0.0145	0.0098	0.0047
71	0.0145	0.0099	0.0047
72	0.0146	0.0099	0.0047
73	0.0146	0.0099	0.0047
74	0.0147	0.0100	0.0047
75	0.0147	0.0100	0.0047

76	0.0148	0.0100	0.0048
77	0.0148	0.0101	0.0048
78	0.0149	0.0101	0.0048
79	0.0150	0.0101	0.0048
80	0.0150	0.0102	0.0048
81	0.0151	0.0102	0.0048
82	0.0151	0.0102	0.0049
83	0.0152	0.0103	0.0049
84	0.0152	0.0103	0.0049
85	0.0153	0.0104	0.0049
86	0.0153	0.0104	0.0049
87	0.0154	0.0105	0.0050
88	0.0154	0.0105	0.0050
89	0.0155	0.0105	0.0050
90	0.0156	0.0106	0.0050
91	0.0156	0.0106	0.0050
92	0.0157	0.0106	0.0050
93	0.0158	0.0107	0.0051
94	0.0158	0.0107	0.0051
95	0.0159	0.0108	0.0051
96	0.0160	0.0108	0.0051
97	0.0160	0.0109	0.0052
98	0.0161	0.0109	0.0052
99	0.0162	0.0110	0.0052
100	0.0162	0.0110	0.0052
101	0.0163	0.0111	0.0052
102	0.0164	0.0111	0.0053
103	0.0165	0.0112	0.0053
104	0.0165	0.0112	0.0053
105	0.0166	0.0113	0.0053
106	0.0167	0.0113	0.0054
107	0.0168	0.0114	0.0054
108	0.0168	0.0114	0.0054
109	0.0169	0.0115	0.0054
110	0.0170	0.0115	0.0055
111	0.0171	0.0116	0.0055
112	0.0172	0.0116	0.0055
113	0.0173	0.0117	0.0056
114	0.0173	0.0118	0.0056
115	0.0175	0.0118	0.0056
116	0.0175	0.0119	0.0056
117	0.0177	0.0120	0.0057
118	0.0177	0.0120	0.0057
119	0.0178	0.0121	0.0057
120	0.0179	0.0122	0.0058
121	0.0180	0.0122	0.0058
122	0.0181	0.0123	0.0058
123	0.0183	0.0124	0.0059
124	0.0183	0.0124	0.0059
125	0.0185	0.0125	0.0059
126	0.0186	0.0126	0.0060
127	0.0187	0.0127	0.0060
128	0.0188	0.0127	0.0060
129	0.0189	0.0129	0.0061
130	0.0190	0.0129	0.0061
131	0.0192	0.0130	0.0062
132	0.0193	0.0131	0.0062
133	0.0194	0.0132	0.0063
134	0.0195	0.0133	0.0063
135	0.0197	0.0134	0.0063
136	0.0198	0.0134	0.0064
137	0.0200	0.0136	0.0064
138	0.0201	0.0136	0.0065
139	0.0203	0.0138	0.0065
140	0.0204	0.0138	0.0066
141	0.0206	0.0140	0.0066
142	0.0207	0.0141	0.0067
143	0.0210	0.0142	0.0067
144	0.0211	0.0143	0.0068
145	0.0224	0.0152	0.0072
146	0.0225	0.0153	0.0072

147	0.0227	0.0154	0.0073
148	0.0229	0.0155	0.0074
149	0.0231	0.0157	0.0074
150	0.0233	0.0158	0.0075
151	0.0235	0.0160	0.0076
152	0.0237	0.0161	0.0076
153	0.0240	0.0163	0.0077
154	0.0241	0.0164	0.0078
155	0.0245	0.0166	0.0079
156	0.0246	0.0167	0.0079
157	0.0250	0.0169	0.0080
158	0.0251	0.0171	0.0081
159	0.0255	0.0173	0.0082
160	0.0257	0.0174	0.0083
161	0.0261	0.0177	0.0084
162	0.0263	0.0179	0.0085
163	0.0268	0.0182	0.0086
164	0.0270	0.0183	0.0087
165	0.0275	0.0186	0.0088
166	0.0277	0.0188	0.0089
167	0.0283	0.0192	0.0091
168	0.0286	0.0194	0.0092
169	0.0292	0.0198	0.0094
170	0.0295	0.0200	0.0095
171	0.0302	0.0205	0.0097
172	0.0305	0.0207	0.0098
173	0.0313	0.0212	0.0101
174	0.0317	0.0215	0.0102
175	0.0326	0.0221	0.0105
176	0.0331	0.0224	0.0106
177	0.0341	0.0231	0.0110
178	0.0347	0.0235	0.0111
179	0.0359	0.0244	0.0115
180	0.0366	0.0248	0.0118
181	0.0381	0.0259	0.0123
182	0.0390	0.0265	0.0125
183	0.0409	0.0278	0.0132
184	0.0421	0.0285	0.0135
185	0.0219	0.0148	0.0070
186	0.0233	0.0158	0.0075
187	0.0270	0.0184	0.0087
188	0.0295	0.0200	0.0095
189	0.0367	0.0249	0.0118
190	0.0423	0.0287	0.0136
191	0.0642	0.0435	0.0206
192	0.0932	0.0559	0.0372
193	0.4030	0.0559	0.3471
194	0.0505	0.0343	0.0162
195	0.0327	0.0222	0.0105
196	0.0250	0.0170	0.0080
197	0.0433	0.0294	0.0139
198	0.0399	0.0271	0.0128
199	0.0373	0.0253	0.0120
200	0.0353	0.0239	0.0113
201	0.0336	0.0228	0.0108
202	0.0321	0.0218	0.0103
203	0.0309	0.0210	0.0099
204	0.0298	0.0202	0.0096
205	0.0289	0.0196	0.0093
206	0.0280	0.0190	0.0090
207	0.0272	0.0185	0.0088
208	0.0265	0.0180	0.0085
209	0.0259	0.0176	0.0083
210	0.0253	0.0172	0.0081
211	0.0248	0.0168	0.0080
212	0.0243	0.0165	0.0078
213	0.0238	0.0162	0.0077
214	0.0234	0.0159	0.0075
215	0.0230	0.0156	0.0074
216	0.0226	0.0153	0.0073
217	0.0212	0.0144	0.0068

218	0.0208	0.0141	0.0067
219	0.0205	0.0139	0.0066
220	0.0202	0.0137	0.0065
221	0.0199	0.0135	0.0064
222	0.0196	0.0133	0.0063
223	0.0194	0.0131	0.0062
224	0.0191	0.0130	0.0061
225	0.0189	0.0128	0.0061
226	0.0186	0.0126	0.0060
227	0.0184	0.0125	0.0059
228	0.0182	0.0123	0.0058
229	0.0180	0.0122	0.0058
230	0.0178	0.0121	0.0057
231	0.0176	0.0119	0.0057
232	0.0174	0.0118	0.0056
233	0.0172	0.0117	0.0055
234	0.0171	0.0116	0.0055
235	0.0169	0.0115	0.0054
236	0.0167	0.0113	0.0054
237	0.0166	0.0112	0.0053
238	0.0164	0.0111	0.0053
239	0.0163	0.0110	0.0052
240	0.0161	0.0109	0.0052
241	0.0160	0.0109	0.0051
242	0.0159	0.0108	0.0051
243	0.0157	0.0107	0.0051
244	0.0156	0.0106	0.0050
245	0.0155	0.0105	0.0050
246	0.0154	0.0104	0.0049
247	0.0152	0.0103	0.0049
248	0.0151	0.0103	0.0049
249	0.0150	0.0102	0.0048
250	0.0149	0.0101	0.0048
251	0.0148	0.0100	0.0048
252	0.0147	0.0100	0.0047
253	0.0146	0.0099	0.0047
254	0.0145	0.0098	0.0047
255	0.0144	0.0098	0.0046
256	0.0143	0.0097	0.0046
257	0.0142	0.0097	0.0046
258	0.0141	0.0096	0.0045
259	0.0141	0.0095	0.0045
260	0.0140	0.0095	0.0045
261	0.0139	0.0094	0.0045
262	0.0138	0.0094	0.0044
263	0.0137	0.0093	0.0044
264	0.0136	0.0093	0.0044
265	0.0136	0.0092	0.0044
266	0.0135	0.0092	0.0043
267	0.0134	0.0091	0.0043
268	0.0133	0.0091	0.0043
269	0.0133	0.0090	0.0043
270	0.0132	0.0090	0.0042
271	0.0131	0.0089	0.0042
272	0.0131	0.0089	0.0042
273	0.0130	0.0088	0.0042
274	0.0129	0.0088	0.0042
275	0.0129	0.0087	0.0041
276	0.0128	0.0087	0.0041
277	0.0127	0.0086	0.0041
278	0.0127	0.0086	0.0041
279	0.0126	0.0086	0.0041
280	0.0126	0.0085	0.0040
281	0.0125	0.0085	0.0040
282	0.0124	0.0084	0.0040
283	0.0124	0.0084	0.0040
284	0.0123	0.0084	0.0040
285	0.0123	0.0083	0.0039
286	0.0122	0.0083	0.0039
287	0.0122	0.0083	0.0039
288	0.0121	0.0082	0.0039

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      ------------------------------------------------------------------
      ------------------------------------------------------------------
      Total soil rain loss =      3.76(In)
      Total effective rainfall =      2.11(In)
      Peak flow rate in flood hydrograph =      7.10(CFS)
      ------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0001      0.01  Q          |         |         |         |
  0+10       0.0005      0.07  Q          |         |         |         |
  0+15       0.0015      0.14  Q          |         |         |         |
  0+20       0.0027      0.17  Q          |         |         |         |
  0+25       0.0039      0.18  Q          |         |         |         |
  0+30       0.0053      0.19  Q          |         |         |         |
  0+35       0.0066      0.20  Q          |         |         |         |
  0+40       0.0080      0.20  Q          |         |         |         |
  0+45       0.0094      0.20  Q          |         |         |         |
  0+50       0.0108      0.20  Q          |         |         |         |
  0+55       0.0123      0.21  Q          |         |         |         |
  1+ 0       0.0137      0.21  Q          |         |         |         |
  1+ 5       0.0151      0.21  Q          |         |         |         |
  1+10       0.0165      0.21  Q          |         |         |         |
  1+15       0.0180      0.21  Q          |         |         |         |
  1+20       0.0194      0.21  QV         |         |         |         |
  1+25       0.0209      0.21  QV         |         |         |         |
  1+30       0.0223      0.21  QV         |         |         |         |
  1+35       0.0238      0.21  QV         |         |         |         |
  1+40       0.0252      0.21  QV         |         |         |         |
  1+45       0.0267      0.21  QV         |         |         |         |
  1+50       0.0281      0.21  QV         |         |         |         |
  1+55       0.0296      0.21  QV         |         |         |         |
  2+ 0       0.0311      0.21  QV         |         |         |         |
  2+ 5       0.0325      0.21  QV         |         |         |         |
  2+10       0.0340      0.21  QV         |         |         |         |
  2+15       0.0355      0.21  QV         |         |         |         |
  2+20       0.0370      0.22  QV         |         |         |         |
  2+25       0.0384      0.22  Q V        |         |         |         |
  2+30       0.0399      0.22  Q V        |         |         |         |
  2+35       0.0414      0.22  Q V        |         |         |         |
  2+40       0.0429      0.22  Q V        |         |         |         |
  2+45       0.0444      0.22  Q V        |         |         |         |
  2+50       0.0459      0.22  Q V        |         |         |         |
  2+55       0.0474      0.22  Q V        |         |         |         |
  3+ 0       0.0489      0.22  Q V        |         |         |         |
  3+ 5       0.0505      0.22  Q V        |         |         |         |
  3+10       0.0520      0.22  Q V        |         |         |         |
  3+15       0.0535      0.22  Q V        |         |         |         |
  3+20       0.0550      0.22  Q V        |         |         |         |
  3+25       0.0566      0.22  Q V        |         |         |         |
  3+30       0.0581      0.22  Q  V       |         |         |         |
  3+35       0.0596      0.22  Q  V       |         |         |         |
  3+40       0.0612      0.22  Q  V       |         |         |         |
  3+45       0.0627      0.22  Q  V       |         |         |         |
  3+50       0.0643      0.23  Q  V       |         |         |         |
  3+55       0.0658      0.23  Q  V       |         |         |         |
  4+ 0       0.0674      0.23  Q  V       |         |         |         |
  4+ 5       0.0690      0.23  Q  V       |         |         |         |
  4+10       0.0705      0.23  Q  V       |         |         |         |
  4+15       0.0721      0.23  Q  V       |         |         |         |
  4+20       0.0737      0.23  Q  V       |         |         |         |
  4+25       0.0753      0.23  Q  V       |         |         |         |
  4+30       0.0769      0.23  Q   V      |         |         |         |
  4+35       0.0784      0.23  Q   V      |         |         |         |
  4+40       0.0800      0.23  Q   V      |         |         |         |
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 4+45      0.0816      0.23  Q   V     |          |          |          |
 4+50      0.0832      0.23  Q   V     |          |          |          |
 4+55      0.0849      0.23  Q   V     |          |          |          |
 5+ 0      0.0865      0.23  Q   V     |          |          |          |
 5+ 5      0.0881      0.24  Q   V     |          |          |          |
 5+10      0.0897      0.24  Q   V     |          |          |          |
 5+15      0.0914      0.24  Q   V     |          |          |          |
 5+20      0.0930      0.24  Q   V     |          |          |          |
 5+25      0.0946      0.24  Q   V     |          |          |          |
 5+30      0.0963      0.24  Q    V    |          |          |          |
 5+35      0.0979      0.24  Q    V    |          |          |          |
 5+40      0.0996      0.24  Q    V    |          |          |          |
 5+45      0.1012      0.24  Q    V    |          |          |          |
 5+50      0.1029      0.24  Q    V    |          |          |          |
 5+55      0.1046      0.24  Q    V    |          |          |          |
 6+ 0      0.1063      0.24  Q    V    |          |          |          |
 6+ 5      0.1079      0.24  Q    V    |          |          |          |
 6+10      0.1096      0.25  Q    V    |          |          |          |
 6+15      0.1113      0.25  Q    V    |          |          |          |
 6+20      0.1130      0.25  Q    V    |          |          |          |
 6+25      0.1147      0.25  Q     V   |          |          |          |
 6+30      0.1164      0.25  Q     V   |          |          |          |
 6+35      0.1182      0.25  Q     V   |          |          |          |
 6+40      0.1199      0.25  |Q    V   |          |          |          |
 6+45      0.1216      0.25  |Q    V   |          |          |          |
 6+50      0.1234      0.25  |Q    V   |          |          |          |
 6+55      0.1251      0.25  |Q    V   |          |          |          |
 7+ 0      0.1269      0.25  |Q    V   |          |          |          |
 7+ 5      0.1286      0.26  |Q    V   |          |          |          |
 7+10      0.1304      0.26  |Q    V   |          |          |          |
 7+15      0.1321      0.26  |Q    V   |          |          |          |
 7+20      0.1339      0.26  |Q     V  |          |          |          |
 7+25      0.1357      0.26  |Q     V  |          |          |          |
 7+30      0.1375      0.26  |Q     V  |          |          |          |
 7+35      0.1393      0.26  |Q     V  |          |          |          |
 7+40      0.1411      0.26  |Q     V  |          |          |          |
 7+45      0.1429      0.26  |Q     V  |          |          |          |
 7+50      0.1447      0.26  |Q     V  |          |          |          |
 7+55      0.1465      0.27  |Q     V  |          |          |          |
 8+ 0      0.1484      0.27  |Q     V  |          |          |          |
 8+ 5      0.1502      0.27  |Q     V  |          |          |          |
 8+10      0.1521      0.27  |Q     V  |          |          |          |
 8+15      0.1539      0.27  |Q      V |          |          |          |
 8+20      0.1558      0.27  |Q      V |          |          |          |
 8+25      0.1577      0.27  |Q      V |          |          |          |
 8+30      0.1595      0.27  |Q      V |          |          |          |
 8+35      0.1614      0.27  |Q      V |          |          |          |
 8+40      0.1633      0.28  |Q      V |          |          |          |
 8+45      0.1652      0.28  |Q      V |          |          |          |
 8+50      0.1671      0.28  |Q      V |          |          |          |
 8+55      0.1691      0.28  |Q      V |          |          |          |
 9+ 0      0.1710      0.28  |Q      V |          |          |          |
 9+ 5      0.1729      0.28  |Q       V|          |          |          |
 9+10      0.1749      0.28  |Q       V|          |          |          |
 9+15      0.1769      0.28  |Q       V|          |          |          |
 9+20      0.1788      0.29  |Q       V|          |          |          |
 9+25      0.1808      0.29  |Q       V|          |          |          |
 9+30      0.1828      0.29  |Q       V|          |          |          |
 9+35      0.1848      0.29  |Q       V|          |          |          |
 9+40      0.1868      0.29  |Q       V|          |          |          |
 9+45      0.1888      0.29  |Q       V|          |          |          |
 9+50      0.1909      0.29  |Q        V          |          |          |
 9+55      0.1929      0.30  |Q        V          |          |          |
10+ 0      0.1950      0.30  |Q        V          |          |          |
10+ 5      0.1970      0.30  |Q        V          |          |          |
10+10      0.1991      0.30  |Q        V          |          |          |
10+15      0.2012      0.30  |Q        V          |          |          |
10+20      0.2033      0.30  |Q        V          |          |          |
10+25      0.2054      0.31  |Q        V          |          |          |
10+30      0.2075      0.31  |Q        V          |          |          |
10+35      0.2097      0.31  |Q        |V         |          |          |
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10+40       0.2118      0.31  |Q        |V        |         |         |
10+45       0.2140      0.31  |Q        |V        |         |         |
10+50       0.2161      0.32  |Q        |V        |         |         |
10+55       0.2183      0.32  |Q        |V        |         |         |
11+ 0       0.2205      0.32  |Q        |V        |         |         |
11+ 5       0.2228      0.32  |Q        |V        |         |         |
11+10       0.2250      0.32  |Q        |V        |         |         |
11+15       0.2272      0.33  |Q        |V        |         |         |
11+20       0.2295      0.33  |Q        | V       |         |         |
11+25       0.2318      0.33  |Q        | V       |         |         |
11+30       0.2341      0.33  |Q        | V       |         |         |
11+35       0.2364      0.34  |Q        | V       |         |         |
11+40       0.2387      0.34  |Q        | V       |         |         |
11+45       0.2411      0.34  |Q        | V       |         |         |
11+50       0.2434      0.34  |Q        | V       |         |         |
11+55       0.2458      0.35  |Q        | V       |         |         |
12+ 0       0.2482      0.35  |Q        |  V      |         |         |
12+ 5       0.2506      0.35  |Q        |  V      |         |         |
12+10       0.2531      0.36  |Q        |  V      |         |         |
12+15       0.2557      0.37  |Q        |  V      |         |         |
12+20       0.2583      0.38  |Q        |  V      |         |         |
12+25       0.2609      0.38  |Q        |  V      |         |         |
12+30       0.2635      0.38  |Q        |  V      |         |         |
12+35       0.2662      0.39  |Q        |  V      |         |         |
12+40       0.2689      0.39  |Q        |   V     |         |         |
12+45       0.2716      0.39  |Q        |   V     |         |         |
12+50       0.2743      0.40  |Q        |   V     |         |         |
12+55       0.2771      0.40  |Q        |   V     |         |         |
13+ 0       0.2799      0.41  |Q        |   V     |         |         |
13+ 5       0.2827      0.41  |Q        |   V     |         |         |
13+10       0.2856      0.41  |Q        |   V     |         |         |
13+15       0.2884      0.42  |Q        |    V    |         |         |
13+20       0.2914      0.42  |Q        |    V    |         |         |
13+25       0.2943      0.43  |Q        |    V    |         |         |
13+30       0.2973      0.43  |Q        |    V    |         |         |
13+35       0.3003      0.44  |Q        |    V    |         |         |
13+40       0.3033      0.44  |Q        |    V    |         |         |
13+45       0.3064      0.45  |Q        |     V   |         |         |
13+50       0.3096      0.45  |Q        |     V   |         |         |
13+55       0.3127      0.46  |Q        |     V   |         |         |
14+ 0       0.3159      0.47  |Q        |     V   |         |         |
14+ 5       0.3192      0.47  |Q        |     V   |         |         |
14+10       0.3225      0.48  |Q        |     V   |         |         |
14+15       0.3259      0.49  |Q        |      V  |         |         |
14+20       0.3293      0.50  |Q        |      V  |         |         |
14+25       0.3328      0.50  | Q       |      V  |         |         |
14+30       0.3363      0.51  | Q       |      V  |         |         |
14+35       0.3399      0.52  | Q       |      V  |         |         |
14+40       0.3436      0.53  | Q       |       V |         |         |
14+45       0.3473      0.54  | Q       |       V |         |         |
14+50       0.3511      0.56  | Q       |       V |         |         |
14+55       0.3551      0.57  | Q       |       V |         |         |
15+ 0       0.3591      0.58  | Q       |       V |         |         |
15+ 5       0.3632      0.60  | Q       |        V|         |         |
15+10       0.3674      0.62  | Q       |        V|         |         |
15+15       0.3718      0.63  | Q       |        V|         |         |
15+20       0.3763      0.66  | Q       |        V|         |         |
15+25       0.3809      0.66  | Q       |        V|         |         |
15+30       0.3849      0.58  | Q       |         V         |         |
15+35       0.3881      0.48  |Q        |         V         |         |
15+40       0.3913      0.46  |Q        |         V         |         |
15+45       0.3947      0.48  |Q        |         V         |         |
15+50       0.3984      0.53  | Q       |         V         |         |
15+55       0.4027      0.63  | Q       |         |V        |         |
16+ 0       0.4084      0.83  |  Q      |         |V        |         |
16+ 5       0.4227      2.08  |       Q |         | V       |         |
16+10       0.4653      6.19  |         |         |   Q     |         |
16+15       0.5142      7.10  |         |         |     V Q |         |
16+20       0.5353      3.06  |         | Q       |       V |         |
16+25       0.5487      1.96  |      Q  |         |       V |         |
16+30       0.5587      1.45  |    Q    |         |        V|         |
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16+35       0.5667      1.15  |   Q     |          |         V|          |
16+40       0.5727      0.87  |  Q      |          |          V          |
16+45       0.5777      0.73  | Q       |          |          V          |
16+50       0.5824      0.68  | Q       |          |          V          |
16+55       0.5868      0.65  | Q       |          |          V          |
17+ 0       0.5909      0.59  | Q       |          |          |V         |
17+ 5       0.5947      0.55  | Q       |          |          |V         |
17+10       0.5982      0.51  | Q       |          |          |V         |
17+15       0.6016      0.49  |Q        |          |          |V         |
17+20       0.6049      0.48  |Q        |          |          |V         |
17+25       0.6081      0.47  |Q        |          |          |V         |
17+30       0.6112      0.45  |Q        |          |          | V        |
17+35       0.6142      0.44  |Q        |          |          | V        |
17+40       0.6172      0.43  |Q        |          |          | V        |
17+45       0.6201      0.42  |Q        |          |          | V        |
17+50       0.6229      0.41  |Q        |          |          | V        |
17+55       0.6257      0.40  |Q        |          |          | V        |
18+ 0       0.6285      0.40  |Q        |          |          | V        |
18+ 5       0.6311      0.39  |Q        |          |          |  V       |
18+10       0.6337      0.38  |Q        |          |          |  V       |
18+15       0.6363      0.36  |Q        |          |          |  V       |
18+20       0.6387      0.36  |Q        |          |          |  V       |
18+25       0.6411      0.35  |Q        |          |          |  V       |
18+30       0.6435      0.34  |Q        |          |          |  V       |
18+35       0.6458      0.34  |Q        |          |          |  V       |
18+40       0.6481      0.33  |Q        |          |          |   V      |
18+45       0.6504      0.33  |Q        |          |          |   V      |
18+50       0.6526      0.32  |Q        |          |          |   V      |
18+55       0.6548      0.32  |Q        |          |          |   V      |
19+ 0       0.6570      0.32  |Q        |          |          |   V      |
19+ 5       0.6591      0.31  |Q        |          |          |   V      |
19+10       0.6612      0.31  |Q        |          |          |   V      |
19+15       0.6633      0.30  |Q        |          |          |   V      |
19+20       0.6654      0.30  |Q        |          |          |   V      |
19+25       0.6674      0.30  |Q        |          |          |    V     |
19+30       0.6695      0.29  |Q        |          |          |    V     |
19+35       0.6715      0.29  |Q        |          |          |    V     |
19+40       0.6735      0.29  |Q        |          |          |    V     |
19+45       0.6754      0.29  |Q        |          |          |    V     |
19+50       0.6774      0.28  |Q        |          |          |    V     |
19+55       0.6793      0.28  |Q        |          |          |    V     |
20+ 0       0.6812      0.28  |Q        |          |          |    V     |
20+ 5       0.6831      0.27  |Q        |          |          |    V     |
20+10       0.6850      0.27  |Q        |          |          |    V     |
20+15       0.6868      0.27  |Q        |          |          |     V    |
20+20       0.6887      0.27  |Q        |          |          |     V    |
20+25       0.6905      0.27  |Q        |          |          |     V    |
20+30       0.6923      0.26  |Q        |          |          |     V    |
20+35       0.6941      0.26  |Q        |          |          |     V    |
20+40       0.6959      0.26  |Q        |          |          |     V    |
20+45       0.6977      0.26  |Q        |          |          |     V    |
20+50       0.6994      0.26  |Q        |          |          |     V    |
20+55       0.7012      0.25  |Q        |          |          |     V    |
21+ 0       0.7029      0.25  |Q        |          |          |     V    |
21+ 5       0.7046      0.25  |Q        |          |          |     V    |
21+10       0.7064      0.25  Q         |          |          |      V   |
21+15       0.7081      0.25  Q         |          |          |      V   |
21+20       0.7097      0.24  Q         |          |          |      V   |
21+25       0.7114      0.24  Q         |          |          |      V   |
21+30       0.7131      0.24  Q         |          |          |      V   |
21+35       0.7147      0.24  Q         |          |          |      V   |
21+40       0.7164      0.24  Q         |          |          |      V   |
21+45       0.7180      0.24  Q         |          |          |      V   |
21+50       0.7196      0.24  Q         |          |          |      V   |
21+55       0.7212      0.23  Q         |          |          |      V   |
22+ 0       0.7229      0.23  Q         |          |          |      V   |
22+ 5       0.7244      0.23  Q         |          |          |       V  |
22+10       0.7260      0.23  Q         |          |          |       V  |
22+15       0.7276      0.23  Q         |          |          |       V  |
22+20       0.7292      0.23  Q         |          |          |       V  |
22+25       0.7307      0.23  Q         |          |          |       V  |
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   22+30       0.7323      0.23  Q          |          |          |       V |
   22+35       0.7338      0.22  Q          |          |          |       V |
   22+40       0.7354      0.22  Q          |          |          |       V |
   22+45       0.7369      0.22  Q          |          |          |       V |
   22+50       0.7384      0.22  Q          |          |          |       V |
   22+55       0.7399      0.22  Q          |          |          |       V |
   23+ 0       0.7414      0.22  Q          |          |          |       V |
   23+ 5       0.7429      0.22  Q          |          |          |       V |
   23+10       0.7444      0.22  Q          |          |          |        V|
   23+15       0.7459      0.21  Q          |          |          |        V|
   23+20       0.7473      0.21  Q          |          |          |        V|
   23+25       0.7488      0.21  Q          |          |          |        V|
   23+30       0.7503      0.21  Q          |          |          |        V|
   23+35       0.7517      0.21  Q          |          |          |        V|
   23+40       0.7532      0.21  Q          |          |          |        V|
   23+45       0.7546      0.21  Q          |          |          |        V|
   23+50       0.7560      0.21  Q          |          |          |        V|
   23+55       0.7575      0.21  Q          |          |          |        V|
   24+ 0       0.7589      0.21  Q          |          |          |        V|
   24+ 5       0.7602      0.19  Q          |          |          |        V|
   24+10       0.7612      0.14  Q          |          |          |        V|
   24+15       0.7616      0.06  Q          |          |          |        V|
   24+20       0.7618      0.04  Q          |          |          |        V|
   24+25       0.7620      0.02  Q          |          |          |        V|
   24+30       0.7621      0.01  Q          |          |          |        V|
   24+35       0.7621      0.01  Q          |          |          |        V|
   24+40       0.7621      0.00  Q          |          |          |        V|
   24+45       0.7622      0.00  Q          |          |          |        V|
   24+50       0.7622      0.00  Q          |          |          |        V|
   24+55       0.7622      0.00  Q          |          |          |        V|
   25+ 0       0.7622      0.00  Q          |          |          |        V|
-------------------------------------------------------------------------
```

Area 'B' – 10 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
10 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             4.33            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      78.0          4.33      1.000     0.404    1.000    0.404

Area-averaged adjusted loss rate Fm (In/Hr) =  0.404

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
4.33	1.000	78.0	78.0	2.82	0.650

Area-averaged catchment yield fraction, Y = 0.650
Area-averaged low loss fraction, Yb = 0.350
User entry of time of concentration = 0.182 (hours)
++
Watershed area = 4.33(Ac.)
Catchment Lag time = 0.146 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 57.2344
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.404(In/Hr)
Average low loss rate fraction (Yb) = 0.350 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 4.33(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.474(In)
30-minute factor = 1.000 Adjusted rainfall = 0.812(In)
1-hour factor = 1.000 Adjusted rainfall = 1.000(In)
3-hour factor = 1.000 Adjusted rainfall = 1.973(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 52.37 (CFS))	
1	5.210	2.728
2	33.842	14.993
3	69.240	18.537
4	82.158	6.765
5	89.615	3.905
6	94.272	2.439
7	97.009	1.433
8	98.250	0.650
9	98.857	0.318
10	99.271	0.217
11	99.677	0.213
12	99.909	0.121
13	100.000	0.048

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4744	0.4744
2	0.5841	0.1097
3	0.6596	0.0755
4	0.7191	0.0595
5	0.7689	0.0498
6	0.8121	0.0432
7	0.8505	0.0384
8	0.8853	0.0348
9	0.9171	0.0318
10	0.9466	0.0295
11	0.9740	0.0275
12	0.9998	0.0258
13	1.0505	0.0507

14	1.0998	0.0493
15	1.1478	0.0480
16	1.1945	0.0467
17	1.2402	0.0456
18	1.2848	0.0446
19	1.3285	0.0437
20	1.3713	0.0428
21	1.4134	0.0420
22	1.4546	0.0413
23	1.4952	0.0406
24	1.5351	0.0399
25	1.5743	0.0393
26	1.6130	0.0387
27	1.6511	0.0381
28	1.6886	0.0376
29	1.7257	0.0371
30	1.7623	0.0366
31	1.7984	0.0361
32	1.8341	0.0357
33	1.8693	0.0352
34	1.9041	0.0348
35	1.9386	0.0345
36	1.9727	0.0341
37	2.0064	0.0337
38	2.0397	0.0334
39	2.0728	0.0330
40	2.1055	0.0327
41	2.1379	0.0324
42	2.1700	0.0321
43	2.2018	0.0318
44	2.2333	0.0315
45	2.2646	0.0313
46	2.2956	0.0310
47	2.3263	0.0307
48	2.3568	0.0305
49	2.3870	0.0302
50	2.4171	0.0300
51	2.4468	0.0298
52	2.4764	0.0296
53	2.5057	0.0293
54	2.5349	0.0291
55	2.5638	0.0289
56	2.5925	0.0287
57	2.6211	0.0285
58	2.6494	0.0283
59	2.6776	0.0282
60	2.7055	0.0280
61	2.7333	0.0278
62	2.7610	0.0276
63	2.7884	0.0275
64	2.8157	0.0273
65	2.8428	0.0271
66	2.8698	0.0270
67	2.8966	0.0268
68	2.9233	0.0267
69	2.9498	0.0265
70	2.9762	0.0264
71	3.0024	0.0262
72	3.0285	0.0261
73	3.0551	0.0266
74	3.0815	0.0265
75	3.1079	0.0263
76	3.1341	0.0262
77	3.1601	0.0261
78	3.1861	0.0259
79	3.2119	0.0258
80	3.2376	0.0257
81	3.2632	0.0256
82	3.2887	0.0255
83	3.3140	0.0254
84	3.3393	0.0253

85	3.3644	0.0251
86	3.3895	0.0250
87	3.4144	0.0249
88	3.4392	0.0248
89	3.4639	0.0247
90	3.4885	0.0246
91	3.5131	0.0245
92	3.5375	0.0244
93	3.5618	0.0243
94	3.5860	0.0242
95	3.6102	0.0241
96	3.6342	0.0240
97	3.6581	0.0239
98	3.6820	0.0239
99	3.7058	0.0238
100	3.7295	0.0237
101	3.7530	0.0236
102	3.7766	0.0235
103	3.8000	0.0234
104	3.8233	0.0233
105	3.8466	0.0233
106	3.8698	0.0232
107	3.8929	0.0231
108	3.9159	0.0230
109	3.9388	0.0229
110	3.9617	0.0229
111	3.9845	0.0228
112	4.0072	0.0227
113	4.0298	0.0226
114	4.0524	0.0226
115	4.0749	0.0225
116	4.0973	0.0224
117	4.1196	0.0224
118	4.1419	0.0223
119	4.1641	0.0222
120	4.1863	0.0221
121	4.2084	0.0221
122	4.2304	0.0220
123	4.2523	0.0219
124	4.2742	0.0219
125	4.2960	0.0218
126	4.3178	0.0218
127	4.3394	0.0217
128	4.3611	0.0216
129	4.3826	0.0216
130	4.4041	0.0215
131	4.4256	0.0214
132	4.4470	0.0214
133	4.4683	0.0213
134	4.4895	0.0213
135	4.5107	0.0212
136	4.5319	0.0211
137	4.5530	0.0211
138	4.5740	0.0210
139	4.5950	0.0210
140	4.6159	0.0209
141	4.6368	0.0209
142	4.6576	0.0208
143	4.6784	0.0208
144	4.6991	0.0207
145	4.7197	0.0207
146	4.7403	0.0206
147	4.7609	0.0206
148	4.7814	0.0205
149	4.8018	0.0205
150	4.8222	0.0204
151	4.8426	0.0204
152	4.8629	0.0203
153	4.8831	0.0203
154	4.9033	0.0202
155	4.9235	0.0202

156	4.9436	0.0201
157	4.9637	0.0201
158	4.9837	0.0200
159	5.0037	0.0200
160	5.0236	0.0199
161	5.0435	0.0199
162	5.0633	0.0198
163	5.0831	0.0198
164	5.1028	0.0197
165	5.1225	0.0197
166	5.1422	0.0197
167	5.1618	0.0196
168	5.1813	0.0196
169	5.2009	0.0195
170	5.2204	0.0195
171	5.2398	0.0194
172	5.2592	0.0194
173	5.2786	0.0194
174	5.2979	0.0193
175	5.3171	0.0193
176	5.3364	0.0192
177	5.3556	0.0192
178	5.3747	0.0192
179	5.3939	0.0191
180	5.4129	0.0191
181	5.4320	0.0190
182	5.4510	0.0190
183	5.4699	0.0190
184	5.4889	0.0189
185	5.5077	0.0189
186	5.5266	0.0189
187	5.5454	0.0188
188	5.5642	0.0188
189	5.5829	0.0187
190	5.6016	0.0187
191	5.6203	0.0187
192	5.6389	0.0186
193	5.6575	0.0186
194	5.6761	0.0186
195	5.6946	0.0185
196	5.7131	0.0185
197	5.7316	0.0185
198	5.7500	0.0184
199	5.7684	0.0184
200	5.7867	0.0184
201	5.8050	0.0183
202	5.8233	0.0183
203	5.8416	0.0183
204	5.8598	0.0182
205	5.8780	0.0182
206	5.8962	0.0182
207	5.9143	0.0181
208	5.9324	0.0181
209	5.9504	0.0181
210	5.9685	0.0180
211	5.9865	0.0180
212	6.0044	0.0180
213	6.0224	0.0179
214	6.0403	0.0179
215	6.0581	0.0179
216	6.0760	0.0178
217	6.0938	0.0178
218	6.1116	0.0178
219	6.1293	0.0178
220	6.1471	0.0177
221	6.1647	0.0177
222	6.1824	0.0177
223	6.2000	0.0176
224	6.2177	0.0176
225	6.2352	0.0176
226	6.2528	0.0175

227	6.2703	0.0175
228	6.2878	0.0175
229	6.3053	0.0175
230	6.3227	0.0174
231	6.3401	0.0174
232	6.3575	0.0174
233	6.3748	0.0174
234	6.3922	0.0173
235	6.4095	0.0173
236	6.4267	0.0173
237	6.4440	0.0172
238	6.4612	0.0172
239	6.4784	0.0172
240	6.4956	0.0172
241	6.5127	0.0171
242	6.5298	0.0171
243	6.5469	0.0171
244	6.5640	0.0171
245	6.5810	0.0170
246	6.5980	0.0170
247	6.6150	0.0170
248	6.6320	0.0170
249	6.6489	0.0169
250	6.6658	0.0169
251	6.6827	0.0169
252	6.6996	0.0169
253	6.7164	0.0168
254	6.7332	0.0168
255	6.7500	0.0168
256	6.7668	0.0168
257	6.7835	0.0167
258	6.8002	0.0167
259	6.8169	0.0167
260	6.8336	0.0167
261	6.8502	0.0166
262	6.8669	0.0166
263	6.8834	0.0166
264	6.9000	0.0166
265	6.9166	0.0166
266	6.9331	0.0165
267	6.9496	0.0165
268	6.9661	0.0165
269	6.9826	0.0165
270	6.9990	0.0164
271	7.0154	0.0164
272	7.0318	0.0164
273	7.0482	0.0164
274	7.0645	0.0164
275	7.0809	0.0163
276	7.0972	0.0163
277	7.1135	0.0163
278	7.1297	0.0163
279	7.1460	0.0162
280	7.1622	0.0162
281	7.1784	0.0162
282	7.1946	0.0162
283	7.2107	0.0162
284	7.2269	0.0161
285	7.2430	0.0161
286	7.2591	0.0161
287	7.2752	0.0161
288	7.2912	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0056	0.0104
2	0.0161	0.0056	0.0105
3	0.0161	0.0056	0.0105
4	0.0161	0.0056	0.0105

5	0.0162	0.0057	0.0105
6	0.0162	0.0057	0.0105
7	0.0162	0.0057	0.0106
8	0.0163	0.0057	0.0106
9	0.0163	0.0057	0.0106
10	0.0163	0.0057	0.0106
11	0.0164	0.0057	0.0106
12	0.0164	0.0057	0.0107
13	0.0164	0.0058	0.0107
14	0.0165	0.0058	0.0107
15	0.0165	0.0058	0.0107
16	0.0165	0.0058	0.0107
17	0.0166	0.0058	0.0108
18	0.0166	0.0058	0.0108
19	0.0166	0.0058	0.0108
20	0.0167	0.0058	0.0108
21	0.0167	0.0058	0.0109
22	0.0167	0.0059	0.0109
23	0.0168	0.0059	0.0109
24	0.0168	0.0059	0.0109
25	0.0169	0.0059	0.0110
26	0.0169	0.0059	0.0110
27	0.0169	0.0059	0.0110
28	0.0170	0.0059	0.0110
29	0.0170	0.0060	0.0111
30	0.0170	0.0060	0.0111
31	0.0171	0.0060	0.0111
32	0.0171	0.0060	0.0111
33	0.0172	0.0060	0.0112
34	0.0172	0.0060	0.0112
35	0.0172	0.0060	0.0112
36	0.0173	0.0060	0.0112
37	0.0173	0.0061	0.0113
38	0.0174	0.0061	0.0113
39	0.0174	0.0061	0.0113
40	0.0174	0.0061	0.0113
41	0.0175	0.0061	0.0114
42	0.0175	0.0061	0.0114
43	0.0176	0.0062	0.0114
44	0.0176	0.0062	0.0114
45	0.0177	0.0062	0.0115
46	0.0177	0.0062	0.0115
47	0.0178	0.0062	0.0115
48	0.0178	0.0062	0.0116
49	0.0178	0.0062	0.0116
50	0.0179	0.0063	0.0116
51	0.0179	0.0063	0.0117
52	0.0180	0.0063	0.0117
53	0.0180	0.0063	0.0117
54	0.0181	0.0063	0.0117
55	0.0181	0.0063	0.0118
56	0.0182	0.0064	0.0118
57	0.0182	0.0064	0.0118
58	0.0183	0.0064	0.0119
59	0.0183	0.0064	0.0119
60	0.0184	0.0064	0.0119
61	0.0184	0.0064	0.0120
62	0.0185	0.0065	0.0120
63	0.0185	0.0065	0.0120
64	0.0186	0.0065	0.0121
65	0.0186	0.0065	0.0121
66	0.0187	0.0065	0.0121
67	0.0187	0.0066	0.0122
68	0.0188	0.0066	0.0122
69	0.0189	0.0066	0.0123
70	0.0189	0.0066	0.0123
71	0.0190	0.0066	0.0123
72	0.0190	0.0066	0.0124
73	0.0191	0.0067	0.0124
74	0.0191	0.0067	0.0124
75	0.0192	0.0067	0.0125

76	0.0192	0.0067	0.0125
77	0.0193	0.0068	0.0126
78	0.0194	0.0068	0.0126
79	0.0194	0.0068	0.0126
80	0.0195	0.0068	0.0127
81	0.0196	0.0068	0.0127
82	0.0196	0.0069	0.0127
83	0.0197	0.0069	0.0128
84	0.0197	0.0069	0.0128
85	0.0198	0.0069	0.0129
86	0.0199	0.0070	0.0129
87	0.0200	0.0070	0.0130
88	0.0200	0.0070	0.0130
89	0.0201	0.0070	0.0131
90	0.0202	0.0071	0.0131
91	0.0203	0.0071	0.0132
92	0.0203	0.0071	0.0132
93	0.0204	0.0071	0.0133
94	0.0205	0.0072	0.0133
95	0.0206	0.0072	0.0134
96	0.0206	0.0072	0.0134
97	0.0207	0.0072	0.0135
98	0.0208	0.0073	0.0135
99	0.0209	0.0073	0.0136
100	0.0209	0.0073	0.0136
101	0.0210	0.0074	0.0137
102	0.0211	0.0074	0.0137
103	0.0212	0.0074	0.0138
104	0.0213	0.0074	0.0138
105	0.0214	0.0075	0.0139
106	0.0214	0.0075	0.0139
107	0.0216	0.0075	0.0140
108	0.0216	0.0076	0.0141
109	0.0218	0.0076	0.0141
110	0.0218	0.0076	0.0142
111	0.0219	0.0077	0.0143
112	0.0220	0.0077	0.0143
113	0.0221	0.0077	0.0144
114	0.0222	0.0078	0.0144
115	0.0224	0.0078	0.0145
116	0.0224	0.0078	0.0146
117	0.0226	0.0079	0.0147
118	0.0226	0.0079	0.0147
119	0.0228	0.0080	0.0148
120	0.0229	0.0080	0.0149
121	0.0230	0.0081	0.0150
122	0.0231	0.0081	0.0150
123	0.0233	0.0081	0.0151
124	0.0233	0.0082	0.0152
125	0.0235	0.0082	0.0153
126	0.0236	0.0083	0.0153
127	0.0238	0.0083	0.0155
128	0.0239	0.0083	0.0155
129	0.0240	0.0084	0.0156
130	0.0241	0.0084	0.0157
131	0.0243	0.0085	0.0158
132	0.0244	0.0085	0.0159
133	0.0246	0.0086	0.0160
134	0.0247	0.0086	0.0161
135	0.0249	0.0087	0.0162
136	0.0250	0.0088	0.0163
137	0.0253	0.0088	0.0164
138	0.0254	0.0089	0.0165
139	0.0256	0.0090	0.0166
140	0.0257	0.0090	0.0167
141	0.0259	0.0091	0.0169
142	0.0261	0.0091	0.0169
143	0.0263	0.0092	0.0171
144	0.0265	0.0093	0.0172
145	0.0261	0.0091	0.0170
146	0.0262	0.0092	0.0170

147	0.0265	0.0093	0.0172
148	0.0267	0.0093	0.0173
149	0.0270	0.0094	0.0175
150	0.0271	0.0095	0.0176
151	0.0275	0.0096	0.0178
152	0.0276	0.0097	0.0180
153	0.0280	0.0098	0.0182
154	0.0282	0.0099	0.0183
155	0.0285	0.0100	0.0185
156	0.0287	0.0101	0.0187
157	0.0291	0.0102	0.0189
158	0.0293	0.0103	0.0191
159	0.0298	0.0104	0.0194
160	0.0300	0.0105	0.0195
161	0.0305	0.0107	0.0198
162	0.0307	0.0108	0.0200
163	0.0313	0.0109	0.0203
164	0.0315	0.0110	0.0205
165	0.0321	0.0112	0.0209
166	0.0324	0.0113	0.0211
167	0.0330	0.0116	0.0215
168	0.0334	0.0117	0.0217
169	0.0341	0.0119	0.0222
170	0.0345	0.0121	0.0224
171	0.0352	0.0123	0.0229
172	0.0357	0.0125	0.0232
173	0.0366	0.0128	0.0238
174	0.0371	0.0130	0.0241
175	0.0381	0.0133	0.0248
176	0.0387	0.0135	0.0251
177	0.0399	0.0140	0.0259
178	0.0406	0.0142	0.0264
179	0.0420	0.0147	0.0273
180	0.0428	0.0150	0.0278
181	0.0446	0.0156	0.0290
182	0.0456	0.0160	0.0297
183	0.0480	0.0168	0.0312
184	0.0493	0.0172	0.0320
185	0.0258	0.0090	0.0167
186	0.0275	0.0096	0.0178
187	0.0318	0.0111	0.0207
188	0.0348	0.0122	0.0226
189	0.0432	0.0151	0.0281
190	0.0498	0.0174	0.0324
191	0.0755	0.0264	0.0491
192	0.1097	0.0336	0.0760
193	0.4744	0.0336	0.4408
194	0.0595	0.0208	0.0387
195	0.0384	0.0135	0.0250
196	0.0295	0.0103	0.0191
197	0.0507	0.0178	0.0330
198	0.0467	0.0164	0.0304
199	0.0437	0.0153	0.0284
200	0.0413	0.0144	0.0268
201	0.0393	0.0137	0.0255
202	0.0376	0.0131	0.0244
203	0.0361	0.0126	0.0235
204	0.0348	0.0122	0.0226
205	0.0337	0.0118	0.0219
206	0.0327	0.0114	0.0213
207	0.0318	0.0111	0.0207
208	0.0310	0.0108	0.0201
209	0.0302	0.0106	0.0197
210	0.0296	0.0103	0.0192
211	0.0289	0.0101	0.0188
212	0.0283	0.0099	0.0184
213	0.0278	0.0097	0.0181
214	0.0273	0.0095	0.0177
215	0.0268	0.0094	0.0174
216	0.0264	0.0092	0.0171
217	0.0266	0.0093	0.0173

218	0.0262	0.0092	0.0170
219	0.0258	0.0090	0.0168
220	0.0255	0.0089	0.0166
221	0.0251	0.0088	0.0163
222	0.0248	0.0087	0.0161
223	0.0245	0.0086	0.0159
224	0.0242	0.0085	0.0157
225	0.0239	0.0084	0.0156
226	0.0237	0.0083	0.0154
227	0.0234	0.0082	0.0152
228	0.0232	0.0081	0.0151
229	0.0229	0.0080	0.0149
230	0.0227	0.0079	0.0148
231	0.0225	0.0079	0.0146
232	0.0223	0.0078	0.0145
233	0.0221	0.0077	0.0144
234	0.0219	0.0077	0.0142
235	0.0217	0.0076	0.0141
236	0.0215	0.0075	0.0140
237	0.0213	0.0075	0.0139
238	0.0211	0.0074	0.0137
239	0.0210	0.0073	0.0136
240	0.0208	0.0073	0.0135
241	0.0207	0.0072	0.0134
242	0.0205	0.0072	0.0133
243	0.0204	0.0071	0.0132
244	0.0202	0.0071	0.0131
245	0.0201	0.0070	0.0130
246	0.0199	0.0070	0.0130
247	0.0198	0.0069	0.0129
248	0.0197	0.0069	0.0128
249	0.0195	0.0068	0.0127
250	0.0194	0.0068	0.0126
251	0.0193	0.0067	0.0125
252	0.0192	0.0067	0.0125
253	0.0190	0.0067	0.0124
254	0.0189	0.0066	0.0123
255	0.0188	0.0066	0.0122
256	0.0187	0.0065	0.0122
257	0.0186	0.0065	0.0121
258	0.0185	0.0065	0.0120
259	0.0184	0.0064	0.0120
260	0.0183	0.0064	0.0119
261	0.0182	0.0064	0.0118
262	0.0181	0.0063	0.0118
263	0.0180	0.0063	0.0117
264	0.0179	0.0063	0.0116
265	0.0178	0.0062	0.0116
266	0.0177	0.0062	0.0115
267	0.0176	0.0062	0.0115
268	0.0175	0.0061	0.0114
269	0.0175	0.0061	0.0114
270	0.0174	0.0061	0.0113
271	0.0173	0.0061	0.0112
272	0.0172	0.0060	0.0112
273	0.0171	0.0060	0.0111
274	0.0171	0.0060	0.0111
275	0.0170	0.0059	0.0110
276	0.0169	0.0059	0.0110
277	0.0168	0.0059	0.0109
278	0.0168	0.0059	0.0109
279	0.0167	0.0058	0.0109
280	0.0166	0.0058	0.0108
281	0.0166	0.0058	0.0108
282	0.0165	0.0058	0.0107
283	0.0164	0.0057	0.0107
284	0.0164	0.0057	0.0106
285	0.0163	0.0057	0.0106
286	0.0162	0.0057	0.0105
287	0.0162	0.0057	0.0105
288	0.0161	0.0056	0.0105

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      ----------------------------------------------------------------------
      ----------------------------------------------------------------------
      Total soil rain loss =      2.41(In)
      Total effective rainfall =      4.88(In)
      Peak flow rate in flood hydrograph =      9.68(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0002      0.03  Q          |         |         |         |
  0+10       0.0015      0.19  Q          |         |         |         |
  0+15       0.0041      0.38  VQ         |         |         |         |
  0+20       0.0072      0.45  VQ         |         |         |         |
  0+25       0.0106      0.49  VQ         |         |         |         |
  0+30       0.0141      0.52  V Q        |         |         |         |
  0+35       0.0178      0.53  V Q        |         |         |         |
  0+40       0.0215      0.54  V Q        |         |         |         |
  0+45       0.0253      0.55  V Q        |         |         |         |
  0+50       0.0291      0.55  V Q        |         |         |         |
  0+55       0.0329      0.55  V Q        |         |         |         |
  1+ 0       0.0367      0.56  V Q        |         |         |         |
  1+ 5       0.0406      0.56  V Q        |         |         |         |
  1+10       0.0444      0.56  |VQ        |         |         |         |
  1+15       0.0482      0.56  |VQ        |         |         |         |
  1+20       0.0521      0.56  |VQ        |         |         |         |
  1+25       0.0560      0.56  |VQ        |         |         |         |
  1+30       0.0598      0.56  |VQ        |         |         |         |
  1+35       0.0637      0.56  |VQ        |         |         |         |
  1+40       0.0676      0.56  |VQ        |         |         |         |
  1+45       0.0715      0.57  |VQ        |         |         |         |
  1+50       0.0754      0.57  |VQ        |         |         |         |
  1+55       0.0793      0.57  |VQ        |         |         |         |
  2+ 0       0.0833      0.57  |VQ        |         |         |         |
  2+ 5       0.0872      0.57  |VQ        |         |         |         |
  2+10       0.0911      0.57  | Q        |         |         |         |
  2+15       0.0951      0.57  | Q        |         |         |         |
  2+20       0.0990      0.57  | Q        |         |         |         |
  2+25       0.1030      0.58  | Q        |         |         |         |
  2+30       0.1070      0.58  | Q        |         |         |         |
  2+35       0.1110      0.58  | Q        |         |         |         |
  2+40       0.1150      0.58  | Q        |         |         |         |
  2+45       0.1190      0.58  | Q        |         |         |         |
  2+50       0.1230      0.58  | Q        |         |         |         |
  2+55       0.1270      0.58  | Q        |         |         |         |
  3+ 0       0.1310      0.59  | Q        |         |         |         |
  3+ 5       0.1351      0.59  | QV       |         |         |         |
  3+10       0.1391      0.59  | QV       |         |         |         |
  3+15       0.1432      0.59  | QV       |         |         |         |
  3+20       0.1472      0.59  | QV       |         |         |         |
  3+25       0.1513      0.59  | QV       |         |         |         |
  3+30       0.1554      0.59  | QV       |         |         |         |
  3+35       0.1595      0.59  | QV       |         |         |         |
  3+40       0.1636      0.60  | QV       |         |         |         |
  3+45       0.1677      0.60  | QV       |         |         |         |
  3+50       0.1718      0.60  | QV       |         |         |         |
  3+55       0.1760      0.60  | Q V      |         |         |         |
  4+ 0       0.1801      0.60  | Q V      |         |         |         |
  4+ 5       0.1843      0.60  | Q V      |         |         |         |
  4+10       0.1885      0.61  | Q V      |         |         |         |
  4+15       0.1926      0.61  | Q V      |         |         |         |
  4+20       0.1968      0.61  | Q V      |         |         |         |
  4+25       0.2010      0.61  | Q V      |         |         |         |
  4+30       0.2052      0.61  | Q V      |         |         |         |
  4+35       0.2095      0.61  | Q V      |         |         |         |
  4+40       0.2137      0.61  | Q V      |         |         |         |
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 4+45      0.2179      0.62  | Q V     |         |         |         |
 4+50      0.2222      0.62  | Q  V    |         |         |         |
 4+55      0.2264      0.62  | Q  V    |         |         |         |
 5+ 0      0.2307      0.62  | Q  V    |         |         |         |
 5+ 5      0.2350      0.62  | Q  V    |         |         |         |
 5+10      0.2393      0.62  | Q  V    |         |         |         |
 5+15      0.2436      0.63  | Q  V    |         |         |         |
 5+20      0.2480      0.63  | Q  V    |         |         |         |
 5+25      0.2523      0.63  | Q  V    |         |         |         |
 5+30      0.2566      0.63  | Q  V    |         |         |         |
 5+35      0.2610      0.63  | Q  V    |         |         |         |
 5+40      0.2654      0.64  | Q   V   |         |         |         |
 5+45      0.2698      0.64  | Q   V   |         |         |         |
 5+50      0.2742      0.64  | Q   V   |         |         |         |
 5+55      0.2786      0.64  | Q   V   |         |         |         |
 6+ 0      0.2830      0.64  | Q   V   |         |         |         |
 6+ 5      0.2874      0.64  | Q   V   |         |         |         |
 6+10      0.2919      0.65  | Q   V   |         |         |         |
 6+15      0.2964      0.65  | Q   V   |         |         |         |
 6+20      0.3008      0.65  | Q   V   |         |         |         |
 6+25      0.3053      0.65  | Q   V   |         |         |         |
 6+30      0.3098      0.65  | Q    V  |         |         |         |
 6+35      0.3144      0.66  | Q    V  |         |         |         |
 6+40      0.3189      0.66  | Q    V  |         |         |         |
 6+45      0.3235      0.66  | Q    V  |         |         |         |
 6+50      0.3280      0.66  | Q    V  |         |         |         |
 6+55      0.3326      0.67  | Q    V  |         |         |         |
 7+ 0      0.3372      0.67  | Q    V  |         |         |         |
 7+ 5      0.3418      0.67  | Q    V  |         |         |         |
 7+10      0.3464      0.67  | Q    V  |         |         |         |
 7+15      0.3511      0.67  | Q    V  |         |         |         |
 7+20      0.3557      0.68  | Q     V |         |         |         |
 7+25      0.3604      0.68  | Q     V |         |         |         |
 7+30      0.3651      0.68  | Q     V |         |         |         |
 7+35      0.3698      0.68  | Q     V |         |         |         |
 7+40      0.3745      0.69  | Q     V |         |         |         |
 7+45      0.3793      0.69  | Q     V |         |         |         |
 7+50      0.3840      0.69  | Q     V |         |         |         |
 7+55      0.3888      0.69  | Q     V |         |         |         |
 8+ 0      0.3936      0.70  | Q     V |         |         |         |
 8+ 5      0.3984      0.70  | Q      V|         |         |         |
 8+10      0.4032      0.70  | Q      V|         |         |         |
 8+15      0.4081      0.70  | Q      V|         |         |         |
 8+20      0.4129      0.71  | Q      V|         |         |         |
 8+25      0.4178      0.71  | Q      V|         |         |         |
 8+30      0.4227      0.71  | Q      V|         |         |         |
 8+35      0.4277      0.71  | Q      V|         |         |         |
 8+40      0.4326      0.72  | Q      V|         |         |         |
 8+45      0.4376      0.72  | Q      V|         |         |         |
 8+50      0.4425      0.72  | Q       V         |         |         |
 8+55      0.4475      0.73  | Q       V         |         |         |
 9+ 0      0.4526      0.73  | Q       V         |         |         |
 9+ 5      0.4576      0.73  | Q       V         |         |         |
 9+10      0.4627      0.74  | Q       V         |         |         |
 9+15      0.4678      0.74  | Q       V         |         |         |
 9+20      0.4729      0.74  | Q       V         |         |         |
 9+25      0.4780      0.75  | Q       V         |         |         |
 9+30      0.4832      0.75  | Q       V         |         |         |
 9+35      0.4883      0.75  |  Q      |V        |         |         |
 9+40      0.4936      0.76  |  Q      |V        |         |         |
 9+45      0.4988      0.76  |  Q      |V        |         |         |
 9+50      0.5040      0.76  |  Q      |V        |         |         |
 9+55      0.5093      0.77  |  Q      |V        |         |         |
10+ 0      0.5146      0.77  |  Q      |V        |         |         |
10+ 5      0.5199      0.77  |  Q      |V        |         |         |
10+10      0.5253      0.78  |  Q      |V        |         |         |
10+15      0.5307      0.78  |  Q      | V       |         |         |
10+20      0.5361      0.79  |  Q      | V       |         |         |
10+25      0.5415      0.79  |  Q      | V       |         |         |
10+30      0.5470      0.79  |  Q      | V       |         |         |
10+35      0.5525      0.80  |  Q      | V       |         |         |
```

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10+40       0.5580      0.80  |  Q       | V        |          |          |
10+45       0.5636      0.81  |  Q       | V        |          |          |
10+50       0.5692      0.81  |  Q       | V        |          |          |
10+55       0.5748      0.82  |  Q       |  V       |          |          |
11+ 0       0.5805      0.82  |  Q       |  V       |          |          |
11+ 5       0.5861      0.83  |  Q       |  V       |          |          |
11+10       0.5919      0.83  |  Q       |  V       |          |          |
11+15       0.5976      0.84  |  Q       |  V       |          |          |
11+20       0.6034      0.84  |  Q       |  V       |          |          |
11+25       0.6092      0.85  |  Q       |  V       |          |          |
11+30       0.6151      0.85  |  Q       |  V       |          |          |
11+35       0.6210      0.86  |  Q       |   V      |          |          |
11+40       0.6269      0.86  |  Q       |   V      |          |          |
11+45       0.6329      0.87  |  Q       |   V      |          |          |
11+50       0.6389      0.87  |  Q       |   V      |          |          |
11+55       0.6450      0.88  |  Q       |   V      |          |          |
12+ 0       0.6511      0.89  |  Q       |   V      |          |          |
12+ 5       0.6573      0.89  |  Q       |   V      |          |          |
12+10       0.6634      0.89  |  Q       |    V     |          |          |
12+15       0.6695      0.89  |  Q       |    V     |          |          |
12+20       0.6757      0.90  |  Q       |    V     |          |          |
12+25       0.6819      0.90  |  Q       |    V     |          |          |
12+30       0.6882      0.91  |  Q       |    V     |          |          |
12+35       0.6945      0.92  |  Q       |    V     |          |          |
12+40       0.7008      0.92  |  Q       |    V     |          |          |
12+45       0.7072      0.93  |  Q       |     V    |          |          |
12+50       0.7137      0.94  |  Q       |     V    |          |          |
12+55       0.7203      0.95  |  Q       |     V    |          |          |
13+ 0       0.7268      0.96  |  Q       |     V    |          |          |
13+ 5       0.7335      0.97  |  Q       |     V    |          |          |
13+10       0.7402      0.98  |  Q       |     V    |          |          |
13+15       0.7470      0.99  |  Q       |     V    |          |          |
13+20       0.7539      1.00  |  Q       |      V   |          |          |
13+25       0.7609      1.01  |   Q      |      V   |          |          |
13+30       0.7679      1.02  |   Q      |      V   |          |          |
13+35       0.7750      1.03  |   Q      |      V   |          |          |
13+40       0.7822      1.04  |   Q      |      V   |          |          |
13+45       0.7895      1.06  |   Q      |      V   |          |          |
13+50       0.7969      1.07  |   Q      |       V  |          |          |
13+55       0.8043      1.09  |   Q      |       V  |          |          |
14+ 0       0.8119      1.10  |   Q      |       V  |          |          |
14+ 5       0.8196      1.12  |   Q      |       V  |          |          |
14+10       0.8274      1.13  |   Q      |       V  |          |          |
14+15       0.8354      1.15  |   Q      |       V  |          |          |
14+20       0.8434      1.17  |   Q      |        V |          |          |
14+25       0.8516      1.19  |   Q      |        V |          |          |
14+30       0.8600      1.21  |   Q      |        V |          |          |
14+35       0.8685      1.24  |   Q      |        V |          |          |
14+40       0.8772      1.26  |    Q     |        V |          |          |
14+45       0.8860      1.29  |    Q     |         V|          |          |
14+50       0.8951      1.31  |    Q     |         V|          |          |
14+55       0.9044      1.35  |    Q     |         V|          |          |
15+ 0       0.9139      1.38  |    Q     |         V|          |          |
15+ 5       0.9236      1.42  |    Q     |          |V         |          |
15+10       0.9336      1.46  |    Q     |          |V         |          |
15+15       0.9440      1.50  |     Q    |          |V         |          |
15+20       0.9547      1.55  |     Q    |          |V         |          |
15+25       0.9655      1.57  |     Q    |          |V         |          |
15+30       0.9749      1.37  |    Q     |          | V        |          |
15+35       0.9827      1.13  |   Q      |          | V        |          |
15+40       0.9903      1.10  |   Q      |          | V        |          |
15+45       0.9982      1.15  |   Q      |          | V        |          |
15+50       1.0070      1.27  |    Q     |          | V        |          |
15+55       1.0172      1.49  |    Q     |          |  V       |          |
16+ 0       1.0306      1.94  |      Q   |          |  V       |          |
16+ 5       1.0561      3.70  |          |   Q      |   V      |          |
16+10       1.1161      8.72  |          |          |    V     |   Q      |
16+15       1.1828      9.68  |          |          |     V    |       Q  |
16+20       1.2146      4.63  |          |        Q |      V   |          |
16+25       1.2361      3.12  |          | Q        |       V  |          |
16+30       1.2533      2.49  |        Q |          |       V  |          |
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16+35      1.2683      2.18  |       Q |         |       V |         |
16+40      1.2808      1.81  |      Q  |         |        V|         |
16+45      1.2919      1.61  |     Q   |         |        V|         |
16+50      1.3023      1.51  |     Q   |         |        V|         |
16+55      1.3123      1.45  |    Q    |         |        V|         |
17+ 0      1.3216      1.35  |    Q    |         |         V         |
17+ 5      1.3304      1.27  |    Q    |         |         V         |
17+10      1.3387      1.21  |   Q     |         |         V         |
17+15      1.3467      1.17  |   Q     |         |         V         |
17+20      1.3545      1.13  |   Q     |         |         V         |
17+25      1.3621      1.10  |   Q     |         |         V         |
17+30      1.3694      1.07  |   Q     |         |         |V        |
17+35      1.3766      1.04  |   Q     |         |         |V        |
17+40      1.3836      1.02  |   Q     |         |         |V        |
17+45      1.3904      0.99  |  Q      |         |         |V        |
17+50      1.3972      0.97  |  Q      |         |         |V        |
17+55      1.4037      0.95  |  Q      |         |         |V        |
18+ 0      1.4102      0.94  |  Q      |         |         | V       |
18+ 5      1.4165      0.92  |  Q      |         |         | V       |
18+10      1.4228      0.91  |  Q      |         |         | V       |
18+15      1.4290      0.90  |  Q      |         |         | V       |
18+20      1.4352      0.89  |  Q      |         |         | V       |
18+25      1.4413      0.88  |  Q      |         |         | V       |
18+30      1.4473      0.87  |  Q      |         |         | V       |
18+35      1.4532      0.86  |  Q      |         |         |  V      |
18+40      1.4590      0.85  |  Q      |         |         |  V      |
18+45      1.4648      0.84  |  Q      |         |         |  V      |
18+50      1.4705      0.83  |  Q      |         |         |  V      |
18+55      1.4761      0.82  |  Q      |         |         |  V      |
19+ 0      1.4817      0.81  |  Q      |         |         |  V      |
19+ 5      1.4872      0.80  |  Q      |         |         |  V      |
19+10      1.4927      0.79  |  Q      |         |         |  V      |
19+15      1.4981      0.78  |  Q      |         |         |   V     |
19+20      1.5034      0.78  |  Q      |         |         |   V     |
19+25      1.5087      0.77  |  Q      |         |         |   V     |
19+30      1.5140      0.76  |  Q      |         |         |   V     |
19+35      1.5192      0.75  |  Q      |         |         |   V     |
19+40      1.5243      0.75  | Q       |         |         |   V     |
19+45      1.5294      0.74  | Q       |         |         |   V     |
19+50      1.5345      0.73  | Q       |         |         |   V     |
19+55      1.5395      0.73  | Q       |         |         |    V    |
20+ 0      1.5445      0.72  | Q       |         |         |    V    |
20+ 5      1.5494      0.72  | Q       |         |         |    V    |
20+10      1.5543      0.71  | Q       |         |         |    V    |
20+15      1.5591      0.71  | Q       |         |         |    V    |
20+20      1.5640      0.70  | Q       |         |         |    V    |
20+25      1.5687      0.69  | Q       |         |         |    V    |
20+30      1.5735      0.69  | Q       |         |         |    V    |
20+35      1.5782      0.68  | Q       |         |         |    V    |
20+40      1.5829      0.68  | Q       |         |         |    V    |
20+45      1.5875      0.68  | Q       |         |         |     V   |
20+50      1.5922      0.67  | Q       |         |         |     V   |
20+55      1.5967      0.67  | Q       |         |         |     V   |
21+ 0      1.6013      0.66  | Q       |         |         |     V   |
21+ 5      1.6058      0.66  | Q       |         |         |     V   |
21+10      1.6103      0.65  | Q       |         |         |     V   |
21+15      1.6148      0.65  | Q       |         |         |     V   |
21+20      1.6193      0.65  | Q       |         |         |     V   |
21+25      1.6237      0.64  | Q       |         |         |     V   |
21+30      1.6281      0.64  | Q       |         |         |      V  |
21+35      1.6324      0.63  | Q       |         |         |      V  |
21+40      1.6368      0.63  | Q       |         |         |      V  |
21+45      1.6411      0.63  | Q       |         |         |      V  |
21+50      1.6454      0.62  | Q       |         |         |      V  |
21+55      1.6497      0.62  | Q       |         |         |      V  |
22+ 0      1.6539      0.62  | Q       |         |         |      V  |
22+ 5      1.6581      0.61  | Q       |         |         |      V  |
22+10      1.6624      0.61  | Q       |         |         |      V  |
22+15      1.6665      0.61  | Q       |         |         |      V  |
22+20      1.6707      0.60  | Q       |         |         |      V  |
22+25      1.6748      0.60  | Q       |         |         |       V |
```

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   22+30       1.6790      0.60  | Q       |         |         |       V |
   22+35       1.6831      0.60  | Q       |         |         |       V |
   22+40       1.6871      0.59  | Q       |         |         |       V |
   22+45       1.6912      0.59  | Q       |         |         |       V |
   22+50       1.6953      0.59  | Q       |         |         |       V |
   22+55       1.6993      0.58  | Q       |         |         |       V |
   23+ 0       1.7033      0.58  | Q       |         |         |       V |
   23+ 5       1.7073      0.58  | Q       |         |         |       V |
   23+10       1.7112      0.58  | Q       |         |         |       V |
   23+15       1.7152      0.57  | Q       |         |         |        V|
   23+20       1.7191      0.57  | Q       |         |         |        V|
   23+25       1.7231      0.57  | Q       |         |         |        V|
   23+30       1.7270      0.57  | Q       |         |         |        V|
   23+35       1.7308      0.56  | Q       |         |         |        V|
   23+40       1.7347      0.56  | Q       |         |         |        V|
   23+45       1.7386      0.56  | Q       |         |         |        V|
   23+50       1.7424      0.56  | Q       |         |         |        V|
   23+55       1.7462      0.56  | Q       |         |         |        V|
   24+ 0       1.7500      0.55  | Q       |         |         |        V|
   24+ 5       1.7536      0.52  | Q       |         |         |        V|
   24+10       1.7561      0.36  |Q        |         |         |        V|
   24+15       1.7573      0.17  Q         |         |         |        V|
   24+20       1.7580      0.10  Q         |         |         |        V|
   24+25       1.7584      0.06  Q         |         |         |        V|
   24+30       1.7586      0.03  Q         |         |         |        V|
   24+35       1.7587      0.02  Q         |         |         |        V|
   24+40       1.7588      0.01  Q         |         |         |        V|
   24+45       1.7588      0.01  Q         |         |         |        V|
   24+50       1.7588      0.00  Q         |         |         |        V|
   24+55       1.7589      0.00  Q         |         |         |        V|
   25+ 0       1.7589      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'B' – 25 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
25 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             4.33            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             4.33           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             4.33           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      78.0          4.33      1.000     0.404    1.000    0.404

Area-averaged adjusted loss rate Fm (In/Hr) =  0.404

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
4.33	1.000	78.0	78.0	2.82	0.707

Area-averaged catchment yield fraction, Y = 0.707
Area-averaged low loss fraction, Yb = 0.293
User entry of time of concentration = 0.182 (hours)
++
Watershed area = 4.33(Ac.)
Catchment Lag time = 0.146 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 57.2344
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.404(In/Hr)
Average low loss rate fraction (Yb) = 0.293 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 4.33(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.569(In)
30-minute factor = 1.000 Adjusted rainfall = 0.974(In)
1-hour factor = 1.000 Adjusted rainfall = 1.199(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 52.37 (CFS))	
1	5.210	2.728
2	33.842	14.993
3	69.240	18.537
4	82.158	6.765
5	89.615	3.905
6	94.272	2.439
7	97.009	1.433
8	98.250	0.650
9	98.857	0.318
10	99.271	0.217
11	99.677	0.213
12	99.909	0.121
13	100.000	0.048

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5688	0.5688
2	0.7003	0.1315
3	0.7909	0.0906
4	0.8622	0.0713
5	0.9218	0.0597
6	0.9737	0.0518
7	1.0198	0.0461
8	1.0614	0.0417
9	1.0996	0.0382
10	1.1349	0.0353
11	1.1678	0.0329
12	1.1987	0.0309
13	1.2593	0.0606

14	1.3181	0.0588
15	1.3754	0.0572
16	1.4311	0.0558
17	1.4856	0.0545
18	1.5388	0.0532
19	1.5909	0.0521
20	1.6420	0.0511
21	1.6921	0.0501
22	1.7413	0.0492
23	1.7896	0.0483
24	1.8371	0.0475
25	1.8839	0.0468
26	1.9300	0.0461
27	1.9754	0.0454
28	2.0201	0.0448
29	2.0643	0.0441
30	2.1078	0.0436
31	2.1508	0.0430
32	2.1933	0.0425
33	2.2353	0.0420
34	2.2768	0.0415
35	2.3178	0.0410
36	2.3584	0.0406
37	2.3985	0.0401
38	2.4382	0.0397
39	2.4775	0.0393
40	2.5165	0.0389
41	2.5550	0.0386
42	2.5932	0.0382
43	2.6311	0.0379
44	2.6686	0.0375
45	2.7058	0.0372
46	2.7426	0.0369
47	2.7792	0.0366
48	2.8155	0.0363
49	2.8514	0.0360
50	2.8871	0.0357
51	2.9226	0.0354
52	2.9577	0.0352
53	2.9926	0.0349
54	3.0273	0.0346
55	3.0617	0.0344
56	3.0958	0.0342
57	3.1298	0.0339
58	3.1635	0.0337
59	3.1969	0.0335
60	3.2302	0.0333
61	3.2633	0.0330
62	3.2961	0.0328
63	3.3287	0.0326
64	3.3612	0.0324
65	3.3934	0.0322
66	3.4255	0.0321
67	3.4573	0.0319
68	3.4890	0.0317
69	3.5205	0.0315
70	3.5519	0.0313
71	3.5830	0.0312
72	3.6140	0.0310
73	3.6476	0.0336
74	3.6811	0.0335
75	3.7144	0.0333
76	3.7476	0.0332
77	3.7806	0.0330
78	3.8135	0.0329
79	3.8463	0.0328
80	3.8789	0.0326
81	3.9114	0.0325
82	3.9437	0.0323
83	3.9759	0.0322
84	4.0080	0.0321

85	4.0400	0.0320
86	4.0718	0.0318
87	4.1036	0.0317
88	4.1352	0.0316
89	4.1666	0.0315
90	4.1980	0.0314
91	4.2293	0.0313
92	4.2604	0.0311
93	4.2914	0.0310
94	4.3224	0.0309
95	4.3532	0.0308
96	4.3839	0.0307
97	4.4145	0.0306
98	4.4450	0.0305
99	4.4754	0.0304
100	4.5057	0.0303
101	4.5359	0.0302
102	4.5660	0.0301
103	4.5960	0.0300
104	4.6259	0.0299
105	4.6557	0.0298
106	4.6854	0.0297
107	4.7150	0.0296
108	4.7446	0.0295
109	4.7740	0.0294
110	4.8034	0.0294
111	4.8326	0.0293
112	4.8618	0.0292
113	4.8909	0.0291
114	4.9199	0.0290
115	4.9488	0.0289
116	4.9777	0.0288
117	5.0065	0.0288
118	5.0351	0.0287
119	5.0637	0.0286
120	5.0923	0.0285
121	5.1207	0.0284
122	5.1491	0.0284
123	5.1774	0.0283
124	5.2056	0.0282
125	5.2337	0.0281
126	5.2618	0.0281
127	5.2898	0.0280
128	5.3177	0.0279
129	5.3456	0.0279
130	5.3734	0.0278
131	5.4011	0.0277
132	5.4287	0.0276
133	5.4563	0.0276
134	5.4838	0.0275
135	5.5112	0.0274
136	5.5386	0.0274
137	5.5659	0.0273
138	5.5931	0.0272
139	5.6203	0.0272
140	5.6474	0.0271
141	5.6745	0.0270
142	5.7014	0.0270
143	5.7284	0.0269
144	5.7552	0.0269
145	5.7820	0.0268
146	5.8088	0.0267
147	5.8354	0.0267
148	5.8621	0.0266
149	5.8886	0.0266
150	5.9151	0.0265
151	5.9416	0.0264
152	5.9679	0.0264
153	5.9943	0.0263
154	6.0205	0.0263
155	6.0468	0.0262

156	6.0729	0.0262
157	6.0990	0.0261
158	6.1251	0.0260
159	6.1511	0.0260
160	6.1770	0.0259
161	6.2029	0.0259
162	6.2287	0.0258
163	6.2545	0.0258
164	6.2802	0.0257
165	6.3059	0.0257
166	6.3315	0.0256
167	6.3571	0.0256
168	6.3827	0.0255
169	6.4081	0.0255
170	6.4336	0.0254
171	6.4589	0.0254
172	6.4843	0.0253
173	6.5096	0.0253
174	6.5348	0.0252
175	6.5600	0.0252
176	6.5851	0.0251
177	6.6102	0.0251
178	6.6353	0.0250
179	6.6602	0.0250
180	6.6852	0.0250
181	6.7101	0.0249
182	6.7350	0.0249
183	6.7598	0.0248
184	6.7846	0.0248
185	6.8093	0.0247
186	6.8340	0.0247
187	6.8586	0.0246
188	6.8832	0.0246
189	6.9078	0.0246
190	6.9323	0.0245
191	6.9568	0.0245
192	6.9812	0.0244
193	7.0056	0.0244
194	7.0299	0.0243
195	7.0542	0.0243
196	7.0785	0.0243
197	7.1027	0.0242
198	7.1269	0.0242
199	7.1510	0.0241
200	7.1751	0.0241
201	7.1992	0.0241
202	7.2232	0.0240
203	7.2472	0.0240
204	7.2711	0.0239
205	7.2951	0.0239
206	7.3189	0.0239
207	7.3428	0.0238
208	7.3665	0.0238
209	7.3903	0.0238
210	7.4140	0.0237
211	7.4377	0.0237
212	7.4613	0.0236
213	7.4849	0.0236
214	7.5085	0.0236
215	7.5321	0.0235
216	7.5556	0.0235
217	7.5790	0.0235
218	7.6024	0.0234
219	7.6258	0.0234
220	7.6492	0.0234
221	7.6725	0.0233
222	7.6958	0.0233
223	7.7190	0.0233
224	7.7423	0.0232
225	7.7655	0.0232
226	7.7886	0.0232

227	7.8117	0.0231
228	7.8348	0.0231
229	7.8579	0.0231
230	7.8809	0.0230
231	7.9039	0.0230
232	7.9268	0.0230
233	7.9497	0.0229
234	7.9726	0.0229
235	7.9955	0.0229
236	8.0183	0.0228
237	8.0411	0.0228
238	8.0638	0.0228
239	8.0866	0.0227
240	8.1093	0.0227
241	8.1319	0.0227
242	8.1546	0.0226
243	8.1772	0.0226
244	8.1997	0.0226
245	8.2223	0.0225
246	8.2448	0.0225
247	8.2673	0.0225
248	8.2897	0.0225
249	8.3122	0.0224
250	8.3345	0.0224
251	8.3569	0.0224
252	8.3792	0.0223
253	8.4016	0.0223
254	8.4238	0.0223
255	8.4461	0.0222
256	8.4683	0.0222
257	8.4905	0.0222
258	8.5127	0.0222
259	8.5348	0.0221
260	8.5569	0.0221
261	8.5790	0.0221
262	8.6010	0.0221
263	8.6230	0.0220
264	8.6450	0.0220
265	8.6670	0.0220
266	8.6889	0.0219
267	8.7109	0.0219
268	8.7327	0.0219
269	8.7546	0.0219
270	8.7764	0.0218
271	8.7982	0.0218
272	8.8200	0.0218
273	8.8418	0.0218
274	8.8635	0.0217
275	8.8852	0.0217
276	8.9069	0.0217
277	8.9285	0.0216
278	8.9502	0.0216
279	8.9718	0.0216
280	8.9933	0.0216
281	9.0149	0.0215
282	9.0364	0.0215
283	9.0579	0.0215
284	9.0794	0.0215
285	9.1008	0.0214
286	9.1222	0.0214
287	9.1436	0.0214
288	9.1650	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0063	0.0151
2	0.0214	0.0063	0.0151
3	0.0214	0.0063	0.0152
4	0.0215	0.0063	0.0152

5	0.0215	0.0063	0.0152
6	0.0215	0.0063	0.0152
7	0.0216	0.0063	0.0153
8	0.0216	0.0063	0.0153
9	0.0217	0.0064	0.0153
10	0.0217	0.0064	0.0153
11	0.0218	0.0064	0.0154
12	0.0218	0.0064	0.0154
13	0.0218	0.0064	0.0154
14	0.0219	0.0064	0.0154
15	0.0219	0.0064	0.0155
16	0.0219	0.0064	0.0155
17	0.0220	0.0065	0.0155
18	0.0220	0.0065	0.0156
19	0.0221	0.0065	0.0156
20	0.0221	0.0065	0.0156
21	0.0222	0.0065	0.0157
22	0.0222	0.0065	0.0157
23	0.0222	0.0065	0.0157
24	0.0223	0.0065	0.0157
25	0.0223	0.0066	0.0158
26	0.0224	0.0066	0.0158
27	0.0224	0.0066	0.0158
28	0.0225	0.0066	0.0159
29	0.0225	0.0066	0.0159
30	0.0225	0.0066	0.0159
31	0.0226	0.0066	0.0160
32	0.0226	0.0066	0.0160
33	0.0227	0.0067	0.0160
34	0.0227	0.0067	0.0161
35	0.0228	0.0067	0.0161
36	0.0228	0.0067	0.0161
37	0.0229	0.0067	0.0162
38	0.0229	0.0067	0.0162
39	0.0230	0.0067	0.0162
40	0.0230	0.0068	0.0163
41	0.0231	0.0068	0.0163
42	0.0231	0.0068	0.0163
43	0.0232	0.0068	0.0164
44	0.0232	0.0068	0.0164
45	0.0233	0.0068	0.0165
46	0.0233	0.0068	0.0165
47	0.0234	0.0069	0.0165
48	0.0234	0.0069	0.0166
49	0.0235	0.0069	0.0166
50	0.0235	0.0069	0.0166
51	0.0236	0.0069	0.0167
52	0.0236	0.0069	0.0167
53	0.0237	0.0070	0.0168
54	0.0238	0.0070	0.0168
55	0.0238	0.0070	0.0168
56	0.0239	0.0070	0.0169
57	0.0239	0.0070	0.0169
58	0.0240	0.0070	0.0169
59	0.0241	0.0071	0.0170
60	0.0241	0.0071	0.0170
61	0.0242	0.0071	0.0171
62	0.0242	0.0071	0.0171
63	0.0243	0.0071	0.0172
64	0.0243	0.0071	0.0172
65	0.0244	0.0072	0.0173
66	0.0245	0.0072	0.0173
67	0.0246	0.0072	0.0174
68	0.0246	0.0072	0.0174
69	0.0247	0.0072	0.0174
70	0.0247	0.0073	0.0175
71	0.0248	0.0073	0.0175
72	0.0249	0.0073	0.0176
73	0.0250	0.0073	0.0176
74	0.0250	0.0073	0.0177
75	0.0251	0.0074	0.0177

76	0.0251	0.0074	0.0178
77	0.0252	0.0074	0.0178
78	0.0253	0.0074	0.0179
79	0.0254	0.0074	0.0179
80	0.0254	0.0075	0.0180
81	0.0255	0.0075	0.0180
82	0.0256	0.0075	0.0181
83	0.0257	0.0075	0.0181
84	0.0257	0.0075	0.0182
85	0.0258	0.0076	0.0183
86	0.0259	0.0076	0.0183
87	0.0260	0.0076	0.0184
88	0.0260	0.0076	0.0184
89	0.0262	0.0077	0.0185
90	0.0262	0.0077	0.0185
91	0.0263	0.0077	0.0186
92	0.0264	0.0077	0.0186
93	0.0265	0.0078	0.0187
94	0.0266	0.0078	0.0188
95	0.0267	0.0078	0.0189
96	0.0267	0.0078	0.0189
97	0.0269	0.0079	0.0190
98	0.0269	0.0079	0.0190
99	0.0270	0.0079	0.0191
100	0.0271	0.0080	0.0192
101	0.0272	0.0080	0.0192
102	0.0273	0.0080	0.0193
103	0.0274	0.0080	0.0194
104	0.0275	0.0081	0.0194
105	0.0276	0.0081	0.0195
106	0.0277	0.0081	0.0196
107	0.0279	0.0082	0.0197
108	0.0279	0.0082	0.0197
109	0.0281	0.0082	0.0198
110	0.0281	0.0083	0.0199
111	0.0283	0.0083	0.0200
112	0.0284	0.0083	0.0200
113	0.0285	0.0084	0.0202
114	0.0286	0.0084	0.0202
115	0.0288	0.0084	0.0203
116	0.0288	0.0085	0.0204
117	0.0290	0.0085	0.0205
118	0.0291	0.0085	0.0206
119	0.0293	0.0086	0.0207
120	0.0294	0.0086	0.0207
121	0.0295	0.0087	0.0209
122	0.0296	0.0087	0.0209
123	0.0298	0.0087	0.0211
124	0.0299	0.0088	0.0211
125	0.0301	0.0088	0.0213
126	0.0302	0.0089	0.0213
127	0.0304	0.0089	0.0215
128	0.0305	0.0089	0.0216
129	0.0307	0.0090	0.0217
130	0.0308	0.0090	0.0218
131	0.0310	0.0091	0.0219
132	0.0311	0.0091	0.0220
133	0.0314	0.0092	0.0222
134	0.0315	0.0092	0.0223
135	0.0317	0.0093	0.0224
136	0.0318	0.0093	0.0225
137	0.0321	0.0094	0.0227
138	0.0322	0.0094	0.0228
139	0.0325	0.0095	0.0230
140	0.0326	0.0096	0.0230
141	0.0329	0.0096	0.0232
142	0.0330	0.0097	0.0233
143	0.0333	0.0098	0.0235
144	0.0335	0.0098	0.0237
145	0.0310	0.0091	0.0219
146	0.0312	0.0091	0.0220

147	0.0315	0.0092	0.0223
148	0.0317	0.0093	0.0224
149	0.0321	0.0094	0.0227
150	0.0322	0.0095	0.0228
151	0.0326	0.0096	0.0231
152	0.0328	0.0096	0.0232
153	0.0333	0.0098	0.0235
154	0.0335	0.0098	0.0237
155	0.0339	0.0100	0.0240
156	0.0342	0.0100	0.0241
157	0.0346	0.0102	0.0245
158	0.0349	0.0102	0.0247
159	0.0354	0.0104	0.0250
160	0.0357	0.0105	0.0252
161	0.0363	0.0106	0.0256
162	0.0366	0.0107	0.0258
163	0.0372	0.0109	0.0263
164	0.0375	0.0110	0.0265
165	0.0382	0.0112	0.0270
166	0.0386	0.0113	0.0272
167	0.0393	0.0115	0.0278
168	0.0397	0.0116	0.0281
169	0.0406	0.0119	0.0287
170	0.0410	0.0120	0.0290
171	0.0420	0.0123	0.0297
172	0.0425	0.0125	0.0300
173	0.0436	0.0128	0.0308
174	0.0441	0.0129	0.0312
175	0.0454	0.0133	0.0321
176	0.0461	0.0135	0.0326
177	0.0475	0.0139	0.0336
178	0.0483	0.0142	0.0342
179	0.0501	0.0147	0.0354
180	0.0511	0.0150	0.0361
181	0.0532	0.0156	0.0376
182	0.0545	0.0160	0.0385
183	0.0572	0.0168	0.0404
184	0.0588	0.0173	0.0416
185	0.0309	0.0091	0.0218
186	0.0329	0.0097	0.0233
187	0.0382	0.0112	0.0270
188	0.0417	0.0122	0.0295
189	0.0518	0.0152	0.0366
190	0.0597	0.0175	0.0422
191	0.0906	0.0266	0.0640
192	0.1315	0.0336	0.0979
193	0.5688	0.0336	0.5352
194	0.0713	0.0209	0.0504
195	0.0461	0.0135	0.0326
196	0.0353	0.0104	0.0250
197	0.0606	0.0178	0.0428
198	0.0558	0.0164	0.0394
199	0.0521	0.0153	0.0368
200	0.0492	0.0144	0.0348
201	0.0468	0.0137	0.0331
202	0.0448	0.0131	0.0316
203	0.0430	0.0126	0.0304
204	0.0415	0.0122	0.0293
205	0.0401	0.0118	0.0284
206	0.0389	0.0114	0.0275
207	0.0379	0.0111	0.0267
208	0.0369	0.0108	0.0261
209	0.0360	0.0106	0.0254
210	0.0352	0.0103	0.0248
211	0.0344	0.0101	0.0243
212	0.0337	0.0099	0.0238
213	0.0330	0.0097	0.0234
214	0.0324	0.0095	0.0229
215	0.0319	0.0093	0.0225
216	0.0313	0.0092	0.0221
217	0.0336	0.0099	0.0238

218	0.0332	0.0097	0.0234
219	0.0328	0.0096	0.0231
220	0.0323	0.0095	0.0229
221	0.0320	0.0094	0.0226
222	0.0316	0.0093	0.0223
223	0.0313	0.0092	0.0221
224	0.0309	0.0091	0.0219
225	0.0306	0.0090	0.0216
226	0.0303	0.0089	0.0214
227	0.0300	0.0088	0.0212
228	0.0297	0.0087	0.0210
229	0.0294	0.0086	0.0208
230	0.0292	0.0086	0.0206
231	0.0289	0.0085	0.0204
232	0.0287	0.0084	0.0203
233	0.0284	0.0083	0.0201
234	0.0282	0.0083	0.0199
235	0.0280	0.0082	0.0198
236	0.0278	0.0081	0.0196
237	0.0276	0.0081	0.0195
238	0.0274	0.0080	0.0193
239	0.0272	0.0080	0.0192
240	0.0270	0.0079	0.0191
241	0.0268	0.0079	0.0189
242	0.0266	0.0078	0.0188
243	0.0264	0.0078	0.0187
244	0.0263	0.0077	0.0186
245	0.0261	0.0077	0.0184
246	0.0259	0.0076	0.0183
247	0.0258	0.0076	0.0182
248	0.0256	0.0075	0.0181
249	0.0255	0.0075	0.0180
250	0.0253	0.0074	0.0179
251	0.0252	0.0074	0.0178
252	0.0250	0.0073	0.0177
253	0.0249	0.0073	0.0176
254	0.0248	0.0073	0.0175
255	0.0246	0.0072	0.0174
256	0.0245	0.0072	0.0173
257	0.0244	0.0072	0.0172
258	0.0243	0.0071	0.0171
259	0.0241	0.0071	0.0171
260	0.0240	0.0070	0.0170
261	0.0239	0.0070	0.0169
262	0.0238	0.0070	0.0168
263	0.0237	0.0069	0.0167
264	0.0236	0.0069	0.0167
265	0.0235	0.0069	0.0166
266	0.0234	0.0069	0.0165
267	0.0233	0.0068	0.0164
268	0.0232	0.0068	0.0164
269	0.0231	0.0068	0.0163
270	0.0230	0.0067	0.0162
271	0.0229	0.0067	0.0162
272	0.0228	0.0067	0.0161
273	0.0227	0.0066	0.0160
274	0.0226	0.0066	0.0160
275	0.0225	0.0066	0.0159
276	0.0224	0.0066	0.0158
277	0.0223	0.0065	0.0158
278	0.0222	0.0065	0.0157
279	0.0221	0.0065	0.0156
280	0.0221	0.0065	0.0156
281	0.0220	0.0064	0.0155
282	0.0219	0.0064	0.0155
283	0.0218	0.0064	0.0154
284	0.0217	0.0064	0.0154
285	0.0216	0.0063	0.0153
286	0.0216	0.0063	0.0152
287	0.0215	0.0063	0.0152
288	0.0214	0.0063	0.0151

```
      ----------------------------------------------------------------------
      ----------------------------------------------------------------------
      Total soil rain loss =      2.55(In)
      Total effective rainfall =      6.62(In)
      Peak flow rate in flood hydrograph =     11.88(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0003      0.04  Q          |          |          |          |
  0+10       0.0021      0.27  Q          |          |          |          |
  0+15       0.0059      0.55  VQ         |          |          |          |
  0+20       0.0104      0.65  VQ         |          |          |          |
  0+25       0.0153      0.71  VQ         |          |          |          |
  0+30       0.0204      0.75  VQ         |          |          |          |
  0+35       0.0258      0.77  VQ         |          |          |          |
  0+40       0.0312      0.78  VQ         |          |          |          |
  0+45       0.0366      0.79  VQ         |          |          |          |
  0+50       0.0421      0.79  VQ         |          |          |          |
  0+55       0.0476      0.80  VQ         |          |          |          |
  1+ 0       0.0531      0.80  VQ         |          |          |          |
  1+ 5       0.0586      0.80  VQ         |          |          |          |
  1+10       0.0642      0.81  |Q         |          |          |          |
  1+15       0.0697      0.81  |Q         |          |          |          |
  1+20       0.0753      0.81  |Q         |          |          |          |
  1+25       0.0809      0.81  |Q         |          |          |          |
  1+30       0.0865      0.81  |Q         |          |          |          |
  1+35       0.0921      0.81  |Q         |          |          |          |
  1+40       0.0977      0.81  |Q         |          |          |          |
  1+45       0.1033      0.82  |Q         |          |          |          |
  1+50       0.1090      0.82  |Q         |          |          |          |
  1+55       0.1146      0.82  |Q         |          |          |          |
  2+ 0       0.1202      0.82  |QV        |          |          |          |
  2+ 5       0.1259      0.82  |QV        |          |          |          |
  2+10       0.1316      0.82  |QV        |          |          |          |
  2+15       0.1373      0.83  |QV        |          |          |          |
  2+20       0.1430      0.83  |QV        |          |          |          |
  2+25       0.1487      0.83  |QV        |          |          |          |
  2+30       0.1544      0.83  |QV        |          |          |          |
  2+35       0.1601      0.83  |QV        |          |          |          |
  2+40       0.1659      0.83  |QV        |          |          |          |
  2+45       0.1716      0.84  |QV        |          |          |          |
  2+50       0.1774      0.84  |QV        |          |          |          |
  2+55       0.1832      0.84  |Q V       |          |          |          |
  3+ 0       0.1890      0.84  |Q V       |          |          |          |
  3+ 5       0.1948      0.84  |Q V       |          |          |          |
  3+10       0.2006      0.84  |Q V       |          |          |          |
  3+15       0.2064      0.85  |Q V       |          |          |          |
  3+20       0.2123      0.85  |Q V       |          |          |          |
  3+25       0.2181      0.85  |Q V       |          |          |          |
  3+30       0.2240      0.85  |Q V       |          |          |          |
  3+35       0.2299      0.85  |Q V       |          |          |          |
  3+40       0.2357      0.86  |Q V       |          |          |          |
  3+45       0.2416      0.86  |Q  V      |          |          |          |
  3+50       0.2476      0.86  |Q  V      |          |          |          |
  3+55       0.2535      0.86  |Q  V      |          |          |          |
  4+ 0       0.2594      0.86  |Q  V      |          |          |          |
  4+ 5       0.2654      0.86  |Q  V      |          |          |          |
  4+10       0.2714      0.87  |Q  V      |          |          |          |
  4+15       0.2773      0.87  |Q  V      |          |          |          |
  4+20       0.2833      0.87  |Q  V      |          |          |          |
  4+25       0.2893      0.87  |Q  V      |          |          |          |
  4+30       0.2954      0.87  |Q  V      |          |          |          |
  4+35       0.3014      0.88  |Q   V     |          |          |          |
  4+40       0.3075      0.88  |Q   V     |          |          |          |
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 4+45      0.3135      0.88  |Q   V    |          |          |          |
 4+50      0.3196      0.88  |Q   V    |          |          |          |
 4+55      0.3257      0.89  |Q   V    |          |          |          |
 5+ 0      0.3318      0.89  |Q   V    |          |          |          |
 5+ 5      0.3379      0.89  |Q   V    |          |          |          |
 5+10      0.3441      0.89  |Q   V    |          |          |          |
 5+15      0.3502      0.89  |Q   V    |          |          |          |
 5+20      0.3564      0.90  |Q   V    |          |          |          |
 5+25      0.3626      0.90  |Q    V   |          |          |          |
 5+30      0.3688      0.90  |Q    V   |          |          |          |
 5+35      0.3750      0.90  |Q    V   |          |          |          |
 5+40      0.3812      0.91  |Q    V   |          |          |          |
 5+45      0.3875      0.91  |Q    V   |          |          |          |
 5+50      0.3938      0.91  |Q    V   |          |          |          |
 5+55      0.4000      0.91  |Q    V   |          |          |          |
 6+ 0      0.4063      0.91  |Q    V   |          |          |          |
 6+ 5      0.4127      0.92  |Q    V   |          |          |          |
 6+10      0.4190      0.92  |Q     V  |          |          |          |
 6+15      0.4254      0.92  |Q     V  |          |          |          |
 6+20      0.4317      0.92  |Q     V  |          |          |          |
 6+25      0.4381      0.93  |Q     V  |          |          |          |
 6+30      0.4445      0.93  |Q     V  |          |          |          |
 6+35      0.4509      0.93  |Q     V  |          |          |          |
 6+40      0.4574      0.94  |Q     V  |          |          |          |
 6+45      0.4638      0.94  |Q     V  |          |          |          |
 6+50      0.4703      0.94  |Q     V  |          |          |          |
 6+55      0.4768      0.94  |Q     V  |          |          |          |
 7+ 0      0.4833      0.95  |Q      V |          |          |          |
 7+ 5      0.4899      0.95  |Q      V |          |          |          |
 7+10      0.4964      0.95  |Q      V |          |          |          |
 7+15      0.5030      0.95  |Q      V |          |          |          |
 7+20      0.5096      0.96  |Q      V |          |          |          |
 7+25      0.5162      0.96  |Q      V |          |          |          |
 7+30      0.5228      0.96  |Q      V |          |          |          |
 7+35      0.5295      0.97  |Q      V |          |          |          |
 7+40      0.5362      0.97  |Q      V |          |          |          |
 7+45      0.5429      0.97  |Q       V|          |          |          |
 7+50      0.5496      0.98  |Q       V|          |          |          |
 7+55      0.5563      0.98  |Q       V|          |          |          |
 8+ 0      0.5631      0.98  |Q       V|          |          |          |
 8+ 5      0.5699      0.99  |Q       V|          |          |          |
 8+10      0.5767      0.99  |Q       V|          |          |          |
 8+15      0.5835      0.99  |Q       V|          |          |          |
 8+20      0.5904      1.00  |Q       V|          |          |          |
 8+25      0.5973      1.00  |Q        V          |          |          |
 8+30      0.6042      1.00  | Q       V          |          |          |
 8+35      0.6111      1.01  | Q       V          |          |          |
 8+40      0.6181      1.01  | Q       V          |          |          |
 8+45      0.6251      1.01  | Q       V          |          |          |
 8+50      0.6321      1.02  | Q       V          |          |          |
 8+55      0.6391      1.02  | Q       V          |          |          |
 9+ 0      0.6462      1.02  | Q       V          |          |          |
 9+ 5      0.6532      1.03  | Q       V          |          |          |
 9+10      0.6604      1.03  | Q       |V         |          |          |
 9+15      0.6675      1.04  | Q       |V         |          |          |
 9+20      0.6747      1.04  | Q       |V         |          |          |
 9+25      0.6819      1.05  | Q       |V         |          |          |
 9+30      0.6891      1.05  | Q       |V         |          |          |
 9+35      0.6963      1.05  | Q       |V         |          |          |
 9+40      0.7036      1.06  | Q       |V         |          |          |
 9+45      0.7109      1.06  | Q       |V         |          |          |
 9+50      0.7183      1.07  | Q       | V        |          |          |
 9+55      0.7257      1.07  | Q       | V        |          |          |
10+ 0      0.7331      1.08  | Q       | V        |          |          |
10+ 5      0.7405      1.08  | Q       | V        |          |          |
10+10      0.7480      1.09  | Q       | V        |          |          |
10+15      0.7555      1.09  | Q       | V        |          |          |
10+20      0.7631      1.10  | Q       | V        |          |          |
10+25      0.7706      1.10  | Q       | V        |          |          |
10+30      0.7783      1.11  | Q       |  V       |          |          |
10+35      0.7859      1.11  | Q       |  V       |          |          |
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10+40       0.7936      1.12  | Q       |  V      |         |         |
10+45       0.8013      1.12  | Q       |  V      |         |         |
10+50       0.8091      1.13  | Q       |  V      |         |         |
10+55       0.8169      1.13  | Q       |  V      |         |         |
11+ 0       0.8248      1.14  | Q       |  V      |         |         |
11+ 5       0.8326      1.15  | Q       |  V      |         |         |
11+10       0.8406      1.15  | Q       |   V     |         |         |
11+15       0.8486      1.16  | Q       |   V     |         |         |
11+20       0.8566      1.16  | Q       |   V     |         |         |
11+25       0.8646      1.17  | Q       |   V     |         |         |
11+30       0.8727      1.18  | Q       |   V     |         |         |
11+35       0.8809      1.18  | Q       |   V     |         |         |
11+40       0.8891      1.19  | Q       |   V     |         |         |
11+45       0.8974      1.20  | Q       |    V    |         |         |
11+50       0.9057      1.21  | Q       |    V    |         |         |
11+55       0.9140      1.21  | Q       |    V    |         |         |
12+ 0       0.9224      1.22  | Q       |    V    |         |         |
12+ 5       0.9309      1.22  | Q       |    V    |         |         |
12+10       0.9391      1.20  | Q       |    V    |         |         |
12+15       0.9472      1.17  | Q       |    V    |         |         |
12+20       0.9553      1.17  | Q       |     V   |         |         |
12+25       0.9634      1.17  | Q       |     V   |         |         |
12+30       0.9715      1.18  | Q       |     V   |         |         |
12+35       0.9796      1.18  | Q       |     V   |         |         |
12+40       0.9879      1.19  | Q       |     V   |         |         |
12+45       0.9962      1.20  | Q       |     V   |         |         |
12+50       1.0045      1.21  | Q       |     V   |         |         |
12+55       1.0130      1.23  | Q       |     V   |         |         |
13+ 0       1.0215      1.24  | Q       |      V  |         |         |
13+ 5       1.0301      1.25  | Q       |      V  |         |         |
13+10       1.0388      1.26  | Q       |      V  |         |         |
13+15       1.0476      1.28  | Q       |      V  |         |         |
13+20       1.0565      1.29  | Q       |      V  |         |         |
13+25       1.0655      1.30  | Q       |      V  |         |         |
13+30       1.0745      1.32  | Q       |       V |         |         |
13+35       1.0837      1.34  | Q       |       V |         |         |
13+40       1.0930      1.35  | Q       |       V |         |         |
13+45       1.1025      1.37  | Q       |       V |         |         |
13+50       1.1120      1.39  | Q       |       V |         |         |
13+55       1.1217      1.41  | Q       |       V |         |         |
14+ 0       1.1315      1.43  | Q       |       V |         |         |
14+ 5       1.1415      1.45  | Q       |        V|         |         |
14+10       1.1516      1.47  | Q       |        V|         |         |
14+15       1.1619      1.49  | Q       |        V|         |         |
14+20       1.1723      1.52  |  Q      |        V|         |         |
14+25       1.1829      1.54  |  Q      |        V|         |         |
14+30       1.1937      1.57  |  Q      |         V         |         |
14+35       1.2047      1.60  |  Q      |         V         |         |
14+40       1.2160      1.63  |  Q      |         V         |         |
14+45       1.2275      1.67  |  Q      |         V         |         |
14+50       1.2392      1.70  |  Q      |         V         |         |
14+55       1.2512      1.74  |  Q      |         V         |         |
15+ 0       1.2635      1.79  |  Q      |         |V        |         |
15+ 5       1.2761      1.84  |  Q      |         |V        |         |
15+10       1.2891      1.89  |  Q      |         |V        |         |
15+15       1.3026      1.95  |  Q      |         |V        |         |
15+20       1.3164      2.01  |   Q     |         | V       |         |
15+25       1.3304      2.03  |   Q     |         | V       |         |
15+30       1.3427      1.78  |  Q      |         | V       |         |
15+35       1.3528      1.47  | Q       |         | V       |         |
15+40       1.3627      1.44  | Q       |         | V       |         |
15+45       1.3730      1.50  |  Q      |         |  V      |         |
15+50       1.3844      1.66  |  Q      |         |  V      |         |
15+55       1.3978      1.94  |  Q      |         |  V      |         |
16+ 0       1.4152      2.52  |    Q    |         |  V      |         |
16+ 5       1.4475      4.70  |       Q |         |   V     |         |
16+10       1.5216     10.75  |         |         |Q   V    |         |
16+15       1.6034     11.88  |         |         |  Q  V   |         |
16+20       1.6430      5.76  |         |Q        |      V  |         |
16+25       1.6699      3.91  |      Q  |         |      V  |         |
16+30       1.6916      3.15  |     Q   |         |       V |         |
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16+35       1.7108      2.78  |    Q    |         |       V |         |
16+40       1.7268      2.32  |   Q     |         |       V |         |
16+45       1.7411      2.08  |   Q     |         |        V|         |
16+50       1.7545      1.95  |  Q      |         |        V|         |
16+55       1.7674      1.87  |  Q      |         |        V|         |
17+ 0       1.7795      1.75  |  Q      |         |        V|         |
17+ 5       1.7908      1.64  |  Q      |         |         V         |
17+10       1.8016      1.56  |  Q      |         |         V         |
17+15       1.8120      1.51  |  Q      |         |         V         |
17+20       1.8220      1.46  | Q       |         |         V         |
17+25       1.8318      1.42  | Q       |         |         V         |
17+30       1.8413      1.38  | Q       |         |         V         |
17+35       1.8506      1.35  | Q       |         |         |V        |
17+40       1.8597      1.32  | Q       |         |         |V        |
17+45       1.8685      1.29  | Q       |         |         |V        |
17+50       1.8772      1.26  | Q       |         |         |V        |
17+55       1.8857      1.23  | Q       |         |         |V        |
18+ 0       1.8940      1.21  | Q       |         |         |V        |
18+ 5       1.9023      1.19  | Q       |         |         |V        |
18+10       1.9105      1.20  | Q       |         |         | V       |
18+15       1.9189      1.22  | Q       |         |         | V       |
18+20       1.9273      1.22  | Q       |         |         | V       |
18+25       1.9356      1.21  | Q       |         |         | V       |
18+30       1.9439      1.20  | Q       |         |         | V       |
18+35       1.9521      1.19  | Q       |         |         | V       |
18+40       1.9601      1.17  | Q       |         |         | V       |
18+45       1.9681      1.16  | Q       |         |         | V       |
18+50       1.9760      1.15  | Q       |         |         |  V      |
18+55       1.9839      1.14  | Q       |         |         |  V      |
19+ 0       1.9916      1.13  | Q       |         |         |  V      |
19+ 5       1.9993      1.11  | Q       |         |         |  V      |
19+10       2.0069      1.10  | Q       |         |         |  V      |
19+15       2.0144      1.09  | Q       |         |         |  V      |
19+20       2.0219      1.08  | Q       |         |         |  V      |
19+25       2.0293      1.07  | Q       |         |         |   V     |
19+30       2.0366      1.06  | Q       |         |         |   V     |
19+35       2.0439      1.06  | Q       |         |         |   V     |
19+40       2.0511      1.05  | Q       |         |         |   V     |
19+45       2.0583      1.04  | Q       |         |         |   V     |
19+50       2.0654      1.03  | Q       |         |         |   V     |
19+55       2.0724      1.02  | Q       |         |         |   V     |
20+ 0       2.0794      1.02  | Q       |         |         |   V     |
20+ 5       2.0863      1.01  | Q       |         |         |   V     |
20+10       2.0932      1.00  | Q       |         |         |    V    |
20+15       2.1001      0.99  |Q        |         |         |    V    |
20+20       2.1069      0.99  |Q        |         |         |    V    |
20+25       2.1136      0.98  |Q        |         |         |    V    |
20+30       2.1204      0.97  |Q        |         |         |    V    |
20+35       2.1270      0.97  |Q        |         |         |    V    |
20+40       2.1337      0.96  |Q        |         |         |    V    |
20+45       2.1402      0.96  |Q        |         |         |    V    |
20+50       2.1468      0.95  |Q        |         |         |    V    |
20+55       2.1533      0.94  |Q        |         |         |     V   |
21+ 0       2.1598      0.94  |Q        |         |         |     V   |
21+ 5       2.1662      0.93  |Q        |         |         |     V   |
21+10       2.1726      0.93  |Q        |         |         |     V   |
21+15       2.1789      0.92  |Q        |         |         |     V   |
21+20       2.1853      0.92  |Q        |         |         |     V   |
21+25       2.1916      0.91  |Q        |         |         |     V   |
21+30       2.1978      0.91  |Q        |         |         |     V   |
21+35       2.2041      0.90  |Q        |         |         |     V   |
21+40       2.2102      0.90  |Q        |         |         |      V  |
21+45       2.2164      0.90  |Q        |         |         |      V  |
21+50       2.2225      0.89  |Q        |         |         |      V  |
21+55       2.2287      0.89  |Q        |         |         |      V  |
22+ 0       2.2347      0.88  |Q        |         |         |      V  |
22+ 5       2.2408      0.88  |Q        |         |         |      V  |
22+10       2.2468      0.87  |Q        |         |         |      V  |
22+15       2.2528      0.87  |Q        |         |         |      V  |
22+20       2.2587      0.87  |Q        |         |         |      V  |
22+25       2.2647      0.86  |Q        |         |         |      V  |
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   22+30       2.2706      0.86  |Q        |         |         |       V |
   22+35       2.2765      0.85  |Q        |         |         |       V |
   22+40       2.2823      0.85  |Q        |         |         |       V |
   22+45       2.2882      0.85  |Q        |         |         |       V |
   22+50       2.2940      0.84  |Q        |         |         |       V |
   22+55       2.2998      0.84  |Q        |         |         |       V |
   23+ 0       2.3055      0.84  |Q        |         |         |       V |
   23+ 5       2.3113      0.83  |Q        |         |         |       V |
   23+10       2.3170      0.83  |Q        |         |         |       V |
   23+15       2.3227      0.83  |Q        |         |         |       V |
   23+20       2.3283      0.82  |Q        |         |         |        V|
   23+25       2.3340      0.82  |Q        |         |         |        V|
   23+30       2.3396      0.82  |Q        |         |         |        V|
   23+35       2.3452      0.81  |Q        |         |         |        V|
   23+40       2.3508      0.81  |Q        |         |         |        V|
   23+45       2.3564      0.81  |Q        |         |         |        V|
   23+50       2.3619      0.81  |Q        |         |         |        V|
   23+55       2.3674      0.80  |Q        |         |         |        V|
   24+ 0       2.3729      0.80  |Q        |         |         |        V|
   24+ 5       2.3781      0.76  |Q        |         |         |        V|
   24+10       2.3818      0.53  |Q        |         |         |        V|
   24+15       2.3835      0.25  Q         |         |         |        V|
   24+20       2.3844      0.14  Q         |         |         |        V|
   24+25       2.3850      0.08  Q         |         |         |        V|
   24+30       2.3853      0.05  Q         |         |         |        V|
   24+35       2.3855      0.02  Q         |         |         |        V|
   24+40       2.3856      0.01  Q         |         |         |        V|
   24+45       2.3856      0.01  Q         |         |         |        V|
   24+50       2.3857      0.01  Q         |         |         |        V|
   24+55       2.3857      0.00  Q         |         |         |        V|
   25+ 0       2.3857      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

Area 'B' – 100 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
100 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             4.33            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             4.33            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             4.33           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             4.33            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             4.33            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             4.33           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      92.8          4.33      1.000     0.140    1.000    0.140

Area-averaged adjusted loss rate Fm (In/Hr) =  0.140

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
4.33	1.000	78.0	92.8	0.78	0.926

Area-averaged catchment yield fraction, Y = 0.926
Area-averaged low loss fraction, Yb = 0.074
User entry of time of concentration = 0.182 (hours)
++
Watershed area = 4.33(Ac.)
Catchment Lag time = 0.146 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 57.2344
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.140(In/Hr)
Average low loss rate fraction (Yb) = 0.074 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 4.33(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.712(In)
30-minute factor = 1.000 Adjusted rainfall = 1.218(In)
1-hour factor = 1.000 Adjusted rainfall = 1.500(In)
3-hour factor = 1.000 Adjusted rainfall = 2.942(In)
6-hour factor = 1.000 Adjusted rainfall = 4.500(In)
24-hour factor = 1.000 Adjusted rainfall = 12.000(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 52.37 (CFS))	
1	5.210	2.728
2	33.842	14.993
3	69.240	18.537
4	82.158	6.765
5	89.615	3.905
6	94.272	2.439
7	97.009	1.433
8	98.250	0.650
9	98.857	0.318
10	99.271	0.217
11	99.677	0.213
12	99.909	0.121
13	100.000	0.048

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7116	0.7116
2	0.8761	0.1645
3	0.9894	0.1133
4	1.0786	0.0892
5	1.1533	0.0747
6	1.2181	0.0648
7	1.2758	0.0577
8	1.3279	0.0521
9	1.3757	0.0478
10	1.4199	0.0442
11	1.4611	0.0412
12	1.4997	0.0386
13	1.5752	0.0755

14	1.6484	0.0732
15	1.7196	0.0712
16	1.7891	0.0694
17	1.8569	0.0678
18	1.9231	0.0662
19	1.9879	0.0648
20	2.0515	0.0635
21	2.1138	0.0623
22	2.1750	0.0612
23	2.2351	0.0601
24	2.2942	0.0591
25	2.3523	0.0582
26	2.4096	0.0573
27	2.4660	0.0564
28	2.5217	0.0556
29	2.5765	0.0549
30	2.6307	0.0541
31	2.6841	0.0534
32	2.7369	0.0528
33	2.7890	0.0521
34	2.8405	0.0515
35	2.8915	0.0510
36	2.9419	0.0504
37	2.9917	0.0498
38	3.0410	0.0493
39	3.0899	0.0488
40	3.1382	0.0483
41	3.1861	0.0479
42	3.2335	0.0474
43	3.2805	0.0470
44	3.3271	0.0466
45	3.3732	0.0462
46	3.4190	0.0458
47	3.4644	0.0454
48	3.5094	0.0450
49	3.5541	0.0447
50	3.5984	0.0443
51	3.6423	0.0440
52	3.6859	0.0436
53	3.7292	0.0433
54	3.7722	0.0430
55	3.8149	0.0427
56	3.8573	0.0424
57	3.8994	0.0421
58	3.9412	0.0418
59	3.9827	0.0415
60	4.0240	0.0413
61	4.0650	0.0410
62	4.1057	0.0407
63	4.1462	0.0405
64	4.1864	0.0402
65	4.2264	0.0400
66	4.2661	0.0398
67	4.3057	0.0395
68	4.3450	0.0393
69	4.3840	0.0391
70	4.4229	0.0388
71	4.4615	0.0386
72	4.4999	0.0384
73	4.5441	0.0441
74	4.5880	0.0440
75	4.6318	0.0438
76	4.6754	0.0436
77	4.7189	0.0434
78	4.7621	0.0433
79	4.8053	0.0431
80	4.8482	0.0430
81	4.8910	0.0428
82	4.9337	0.0426
83	4.9761	0.0425
84	5.0185	0.0423

85	5.0607	0.0422
86	5.1027	0.0421
87	5.1446	0.0419
88	5.1864	0.0418
89	5.2280	0.0416
90	5.2695	0.0415
91	5.3109	0.0414
92	5.3521	0.0412
93	5.3932	0.0411
94	5.4342	0.0410
95	5.4750	0.0408
96	5.5157	0.0407
97	5.5563	0.0406
98	5.5968	0.0405
99	5.6371	0.0403
100	5.6774	0.0402
101	5.7175	0.0401
102	5.7575	0.0400
103	5.7974	0.0399
104	5.8371	0.0398
105	5.8768	0.0397
106	5.9163	0.0395
107	5.9558	0.0394
108	5.9951	0.0393
109	6.0343	0.0392
110	6.0734	0.0391
111	6.1124	0.0390
112	6.1513	0.0389
113	6.1902	0.0388
114	6.2289	0.0387
115	6.2675	0.0386
116	6.3060	0.0385
117	6.3444	0.0384
118	6.3827	0.0383
119	6.4209	0.0382
120	6.4591	0.0381
121	6.4971	0.0380
122	6.5351	0.0379
123	6.5729	0.0379
124	6.6107	0.0378
125	6.6483	0.0377
126	6.6859	0.0376
127	6.7234	0.0375
128	6.7608	0.0374
129	6.7982	0.0373
130	6.8354	0.0372
131	6.8726	0.0372
132	6.9097	0.0371
133	6.9467	0.0370
134	6.9836	0.0369
135	7.0204	0.0368
136	7.0572	0.0368
137	7.0938	0.0367
138	7.1304	0.0366
139	7.1669	0.0365
140	7.2034	0.0364
141	7.2398	0.0364
142	7.2760	0.0363
143	7.3123	0.0362
144	7.3484	0.0361
145	7.3845	0.0361
146	7.4205	0.0360
147	7.4564	0.0359
148	7.4922	0.0359
149	7.5280	0.0358
150	7.5637	0.0357
151	7.5994	0.0356
152	7.6350	0.0356
153	7.6705	0.0355
154	7.7059	0.0354
155	7.7413	0.0354

156	7.7766	0.0353
157	7.8118	0.0352
158	7.8470	0.0352
159	7.8821	0.0351
160	7.9171	0.0350
161	7.9521	0.0350
162	7.9870	0.0349
163	8.0219	0.0349
164	8.0567	0.0348
165	8.0914	0.0347
166	8.1260	0.0347
167	8.1607	0.0346
168	8.1952	0.0345
169	8.2297	0.0345
170	8.2641	0.0344
171	8.2985	0.0344
172	8.3328	0.0343
173	8.3670	0.0342
174	8.4012	0.0342
175	8.4353	0.0341
176	8.4694	0.0341
177	8.5034	0.0340
178	8.5374	0.0340
179	8.5713	0.0339
180	8.6052	0.0339
181	8.6390	0.0338
182	8.6727	0.0337
183	8.7064	0.0337
184	8.7400	0.0336
185	8.7736	0.0336
186	8.8071	0.0335
187	8.8406	0.0335
188	8.8740	0.0334
189	8.9074	0.0334
190	8.9407	0.0333
191	8.9740	0.0333
192	9.0072	0.0332
193	9.0404	0.0332
194	9.0735	0.0331
195	9.1066	0.0331
196	9.1396	0.0330
197	9.1725	0.0330
198	9.2055	0.0329
199	9.2383	0.0329
200	9.2711	0.0328
201	9.3039	0.0328
202	9.3366	0.0327
203	9.3693	0.0327
204	9.4020	0.0326
205	9.4345	0.0326
206	9.4671	0.0325
207	9.4996	0.0325
208	9.5320	0.0324
209	9.5644	0.0324
210	9.5968	0.0324
211	9.6291	0.0323
212	9.6614	0.0323
213	9.6936	0.0322
214	9.7258	0.0322
215	9.7579	0.0321
216	9.7900	0.0321
217	9.8220	0.0320
218	9.8540	0.0320
219	9.8860	0.0320
220	9.9179	0.0319
221	9.9498	0.0319
222	9.9816	0.0318
223	10.0134	0.0318
224	10.0452	0.0317
225	10.0769	0.0317
226	10.1085	0.0317

227	10.1402	0.0316
228	10.1717	0.0316
229	10.2033	0.0315
230	10.2348	0.0315
231	10.2662	0.0315
232	10.2977	0.0314
233	10.3291	0.0314
234	10.3604	0.0313
235	10.3917	0.0313
236	10.4230	0.0313
237	10.4542	0.0312
238	10.4854	0.0312
239	10.5165	0.0312
240	10.5477	0.0311
241	10.5787	0.0311
242	10.6098	0.0310
243	10.6408	0.0310
244	10.6717	0.0310
245	10.7027	0.0309
246	10.7336	0.0309
247	10.7644	0.0309
248	10.7952	0.0308
249	10.8260	0.0308
250	10.8567	0.0307
251	10.8875	0.0307
252	10.9181	0.0307
253	10.9488	0.0306
254	10.9794	0.0306
255	11.0099	0.0306
256	11.0405	0.0305
257	11.0710	0.0305
258	11.1014	0.0305
259	11.1318	0.0304
260	11.1622	0.0304
261	11.1926	0.0304
262	11.2229	0.0303
263	11.2532	0.0303
264	11.2835	0.0303
265	11.3137	0.0302
266	11.3439	0.0302
267	11.3740	0.0302
268	11.4042	0.0301
269	11.4343	0.0301
270	11.4643	0.0301
271	11.4943	0.0300
272	11.5243	0.0300
273	11.5543	0.0300
274	11.5842	0.0299
275	11.6141	0.0299
276	11.6440	0.0299
277	11.6738	0.0298
278	11.7036	0.0298
279	11.7334	0.0298
280	11.7631	0.0297
281	11.7928	0.0297
282	11.8225	0.0297
283	11.8522	0.0296
284	11.8818	0.0296
285	11.9114	0.0296
286	11.9409	0.0296
287	11.9704	0.0295
288	11.9999	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0022	0.0273
2	0.0295	0.0022	0.0274
3	0.0296	0.0022	0.0274
4	0.0296	0.0022	0.0274

5	0.0297	0.0022	0.0275
6	0.0297	0.0022	0.0275
7	0.0298	0.0022	0.0276
8	0.0298	0.0022	0.0276
9	0.0299	0.0022	0.0277
10	0.0299	0.0022	0.0277
11	0.0300	0.0022	0.0278
12	0.0300	0.0022	0.0278
13	0.0301	0.0022	0.0278
14	0.0301	0.0022	0.0279
15	0.0302	0.0022	0.0279
16	0.0302	0.0022	0.0280
17	0.0303	0.0022	0.0280
18	0.0303	0.0022	0.0281
19	0.0304	0.0022	0.0281
20	0.0304	0.0022	0.0282
21	0.0305	0.0022	0.0282
22	0.0305	0.0022	0.0283
23	0.0306	0.0022	0.0283
24	0.0306	0.0023	0.0283
25	0.0307	0.0023	0.0284
26	0.0307	0.0023	0.0284
27	0.0308	0.0023	0.0285
28	0.0308	0.0023	0.0285
29	0.0309	0.0023	0.0286
30	0.0309	0.0023	0.0286
31	0.0310	0.0023	0.0287
32	0.0310	0.0023	0.0288
33	0.0311	0.0023	0.0288
34	0.0312	0.0023	0.0289
35	0.0312	0.0023	0.0289
36	0.0313	0.0023	0.0290
37	0.0313	0.0023	0.0290
38	0.0314	0.0023	0.0291
39	0.0315	0.0023	0.0291
40	0.0315	0.0023	0.0292
41	0.0316	0.0023	0.0293
42	0.0316	0.0023	0.0293
43	0.0317	0.0023	0.0294
44	0.0317	0.0023	0.0294
45	0.0318	0.0023	0.0295
46	0.0319	0.0023	0.0295
47	0.0320	0.0024	0.0296
48	0.0320	0.0024	0.0296
49	0.0321	0.0024	0.0297
50	0.0321	0.0024	0.0298
51	0.0322	0.0024	0.0298
52	0.0323	0.0024	0.0299
53	0.0324	0.0024	0.0300
54	0.0324	0.0024	0.0300
55	0.0325	0.0024	0.0301
56	0.0325	0.0024	0.0301
57	0.0326	0.0024	0.0302
58	0.0327	0.0024	0.0303
59	0.0328	0.0024	0.0304
60	0.0328	0.0024	0.0304
61	0.0329	0.0024	0.0305
62	0.0330	0.0024	0.0305
63	0.0331	0.0024	0.0306
64	0.0331	0.0024	0.0307
65	0.0332	0.0024	0.0308
66	0.0333	0.0024	0.0308
67	0.0334	0.0025	0.0309
68	0.0334	0.0025	0.0310
69	0.0335	0.0025	0.0311
70	0.0336	0.0025	0.0311
71	0.0337	0.0025	0.0312
72	0.0337	0.0025	0.0313
73	0.0339	0.0025	0.0314
74	0.0339	0.0025	0.0314
75	0.0340	0.0025	0.0315

76	0.0341	0.0025	0.0316
77	0.0342	0.0025	0.0317
78	0.0342	0.0025	0.0317
79	0.0344	0.0025	0.0318
80	0.0344	0.0025	0.0319
81	0.0345	0.0025	0.0320
82	0.0346	0.0025	0.0321
83	0.0347	0.0026	0.0322
84	0.0348	0.0026	0.0322
85	0.0349	0.0026	0.0323
86	0.0350	0.0026	0.0324
87	0.0351	0.0026	0.0325
88	0.0352	0.0026	0.0326
89	0.0353	0.0026	0.0327
90	0.0354	0.0026	0.0328
91	0.0355	0.0026	0.0329
92	0.0356	0.0026	0.0330
93	0.0357	0.0026	0.0331
94	0.0358	0.0026	0.0331
95	0.0359	0.0026	0.0333
96	0.0360	0.0026	0.0333
97	0.0361	0.0027	0.0335
98	0.0362	0.0027	0.0336
99	0.0364	0.0027	0.0337
100	0.0364	0.0027	0.0338
101	0.0366	0.0027	0.0339
102	0.0367	0.0027	0.0340
103	0.0368	0.0027	0.0341
104	0.0369	0.0027	0.0342
105	0.0371	0.0027	0.0343
106	0.0372	0.0027	0.0344
107	0.0373	0.0027	0.0346
108	0.0374	0.0028	0.0347
109	0.0376	0.0028	0.0348
110	0.0377	0.0028	0.0349
111	0.0379	0.0028	0.0351
112	0.0379	0.0028	0.0352
113	0.0381	0.0028	0.0353
114	0.0382	0.0028	0.0354
115	0.0384	0.0028	0.0356
116	0.0385	0.0028	0.0357
117	0.0387	0.0028	0.0359
118	0.0388	0.0029	0.0360
119	0.0390	0.0029	0.0361
120	0.0391	0.0029	0.0362
121	0.0393	0.0029	0.0364
122	0.0394	0.0029	0.0365
123	0.0397	0.0029	0.0367
124	0.0398	0.0029	0.0368
125	0.0400	0.0029	0.0371
126	0.0401	0.0030	0.0372
127	0.0403	0.0030	0.0374
128	0.0405	0.0030	0.0375
129	0.0407	0.0030	0.0377
130	0.0408	0.0030	0.0378
131	0.0411	0.0030	0.0381
132	0.0412	0.0030	0.0382
133	0.0415	0.0031	0.0384
134	0.0416	0.0031	0.0386
135	0.0419	0.0031	0.0388
136	0.0421	0.0031	0.0390
137	0.0423	0.0031	0.0392
138	0.0425	0.0031	0.0394
139	0.0428	0.0032	0.0396
140	0.0430	0.0032	0.0398
141	0.0433	0.0032	0.0401
142	0.0434	0.0032	0.0402
143	0.0438	0.0032	0.0406
144	0.0440	0.0032	0.0407
145	0.0384	0.0028	0.0356
146	0.0386	0.0028	0.0358

147	0.0391	0.0029	0.0362
148	0.0393	0.0029	0.0364
149	0.0398	0.0029	0.0368
150	0.0400	0.0029	0.0370
151	0.0405	0.0030	0.0375
152	0.0407	0.0030	0.0377
153	0.0413	0.0030	0.0382
154	0.0415	0.0031	0.0385
155	0.0421	0.0031	0.0390
156	0.0424	0.0031	0.0393
157	0.0430	0.0032	0.0398
158	0.0433	0.0032	0.0401
159	0.0440	0.0032	0.0407
160	0.0443	0.0033	0.0410
161	0.0450	0.0033	0.0417
162	0.0454	0.0033	0.0420
163	0.0462	0.0034	0.0428
164	0.0466	0.0034	0.0431
165	0.0474	0.0035	0.0439
166	0.0479	0.0035	0.0444
167	0.0488	0.0036	0.0452
168	0.0493	0.0036	0.0457
169	0.0504	0.0037	0.0467
170	0.0510	0.0038	0.0472
171	0.0521	0.0038	0.0483
172	0.0528	0.0039	0.0489
173	0.0541	0.0040	0.0501
174	0.0549	0.0040	0.0508
175	0.0564	0.0042	0.0523
176	0.0573	0.0042	0.0531
177	0.0591	0.0044	0.0548
178	0.0601	0.0044	0.0557
179	0.0623	0.0046	0.0577
180	0.0635	0.0047	0.0589
181	0.0662	0.0049	0.0614
182	0.0678	0.0050	0.0628
183	0.0712	0.0052	0.0660
184	0.0732	0.0054	0.0679
185	0.0386	0.0028	0.0358
186	0.0412	0.0030	0.0382
187	0.0478	0.0035	0.0442
188	0.0521	0.0038	0.0483
189	0.0648	0.0048	0.0601
190	0.0747	0.0055	0.0692
191	0.1133	0.0083	0.1050
192	0.1645	0.0117	0.1528
193	0.7116	0.0117	0.7000
194	0.0892	0.0066	0.0826
195	0.0577	0.0042	0.0534
196	0.0442	0.0033	0.0409
197	0.0755	0.0056	0.0699
198	0.0694	0.0051	0.0643
199	0.0648	0.0048	0.0601
200	0.0612	0.0045	0.0567
201	0.0582	0.0043	0.0539
202	0.0556	0.0041	0.0515
203	0.0534	0.0039	0.0495
204	0.0515	0.0038	0.0477
205	0.0498	0.0037	0.0462
206	0.0483	0.0036	0.0448
207	0.0470	0.0035	0.0435
208	0.0458	0.0034	0.0424
209	0.0447	0.0033	0.0414
210	0.0436	0.0032	0.0404
211	0.0427	0.0031	0.0395
212	0.0418	0.0031	0.0387
213	0.0410	0.0030	0.0380
214	0.0402	0.0030	0.0373
215	0.0395	0.0029	0.0366
216	0.0388	0.0029	0.0360
217	0.0441	0.0032	0.0409

218	0.0436	0.0032	0.0404
219	0.0431	0.0032	0.0399
220	0.0426	0.0031	0.0395
221	0.0422	0.0031	0.0391
222	0.0418	0.0031	0.0387
223	0.0414	0.0030	0.0383
224	0.0410	0.0030	0.0380
225	0.0406	0.0030	0.0376
226	0.0402	0.0030	0.0373
227	0.0399	0.0029	0.0369
228	0.0395	0.0029	0.0366
229	0.0392	0.0029	0.0363
230	0.0389	0.0029	0.0360
231	0.0386	0.0028	0.0358
232	0.0383	0.0028	0.0355
233	0.0380	0.0028	0.0352
234	0.0378	0.0028	0.0350
235	0.0375	0.0028	0.0347
236	0.0372	0.0027	0.0345
237	0.0370	0.0027	0.0343
238	0.0368	0.0027	0.0340
239	0.0365	0.0027	0.0338
240	0.0363	0.0027	0.0336
241	0.0361	0.0027	0.0334
242	0.0359	0.0026	0.0332
243	0.0356	0.0026	0.0330
244	0.0354	0.0026	0.0328
245	0.0352	0.0026	0.0326
246	0.0350	0.0026	0.0325
247	0.0349	0.0026	0.0323
248	0.0347	0.0026	0.0321
249	0.0345	0.0025	0.0319
250	0.0343	0.0025	0.0318
251	0.0341	0.0025	0.0316
252	0.0340	0.0025	0.0315
253	0.0338	0.0025	0.0313
254	0.0336	0.0025	0.0312
255	0.0335	0.0025	0.0310
256	0.0333	0.0025	0.0309
257	0.0332	0.0024	0.0307
258	0.0330	0.0024	0.0306
259	0.0329	0.0024	0.0305
260	0.0327	0.0024	0.0303
261	0.0326	0.0024	0.0302
262	0.0324	0.0024	0.0301
263	0.0323	0.0024	0.0299
264	0.0322	0.0024	0.0298
265	0.0320	0.0024	0.0297
266	0.0319	0.0023	0.0296
267	0.0318	0.0023	0.0295
268	0.0317	0.0023	0.0293
269	0.0315	0.0023	0.0292
270	0.0314	0.0023	0.0291
271	0.0313	0.0023	0.0290
272	0.0312	0.0023	0.0289
273	0.0311	0.0023	0.0288
274	0.0310	0.0023	0.0287
275	0.0309	0.0023	0.0286
276	0.0307	0.0023	0.0285
277	0.0306	0.0023	0.0284
278	0.0305	0.0022	0.0283
279	0.0304	0.0022	0.0282
280	0.0303	0.0022	0.0281
281	0.0302	0.0022	0.0280
282	0.0301	0.0022	0.0279
283	0.0300	0.0022	0.0278
284	0.0299	0.0022	0.0277
285	0.0298	0.0022	0.0276
286	0.0297	0.0022	0.0276
287	0.0296	0.0022	0.0275
288	0.0296	0.0022	0.0274

```
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      0.84(In)
      Total effective rainfall =     11.16(In)
      Peak flow rate in flood hydrograph =     16.13(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0005      0.07  Q         |         |         |         |
  0+10       0.0038      0.48  Q         |         |         |         |
  0+15       0.0107      0.99  VQ        |         |         |         |
  0+20       0.0188      1.18  V Q       |         |         |         |
  0+25       0.0276      1.29  V Q       |         |         |         |
  0+30       0.0370      1.35  V Q       |         |         |         |
  0+35       0.0466      1.40  V Q       |         |         |         |
  0+40       0.0563      1.42  V Q       |         |         |         |
  0+45       0.0662      1.43  V Q       |         |         |         |
  0+50       0.0760      1.43  V Q       |         |         |         |
  0+55       0.0860      1.44  V Q       |         |         |         |
  1+ 0       0.0960      1.45  V Q       |         |         |         |
  1+ 5       0.1060      1.45  |VQ       |         |         |         |
  1+10       0.1160      1.45  |VQ       |         |         |         |
  1+15       0.1260      1.46  |VQ       |         |         |         |
  1+20       0.1361      1.46  |VQ       |         |         |         |
  1+25       0.1461      1.46  |VQ       |         |         |         |
  1+30       0.1562      1.46  |VQ       |         |         |         |
  1+35       0.1663      1.47  |VQ       |         |         |         |
  1+40       0.1764      1.47  |VQ       |         |         |         |
  1+45       0.1866      1.47  |VQ       |         |         |         |
  1+50       0.1967      1.47  |VQ       |         |         |         |
  1+55       0.2069      1.48  | Q       |         |         |         |
  2+ 0       0.2171      1.48  | Q       |         |         |         |
  2+ 5       0.2273      1.48  | Q       |         |         |         |
  2+10       0.2375      1.48  | Q       |         |         |         |
  2+15       0.2477      1.49  | Q       |         |         |         |
  2+20       0.2580      1.49  | Q       |         |         |         |
  2+25       0.2683      1.49  | Q       |         |         |         |
  2+30       0.2786      1.49  | Q       |         |         |         |
  2+35       0.2889      1.50  | Q       |         |         |         |
  2+40       0.2992      1.50  | Q       |         |         |         |
  2+45       0.3096      1.50  |  Q      |         |         |         |
  2+50       0.3199      1.51  |  Q      |         |         |         |
  2+55       0.3303      1.51  |  Q      |         |         |         |
  3+ 0       0.3407      1.51  |  Q      |         |         |         |
  3+ 5       0.3511      1.51  |  Q      |         |         |         |
  3+10       0.3616      1.52  |  Q      |         |         |         |
  3+15       0.3720      1.52  |  Q      |         |         |         |
  3+20       0.3825      1.52  |  Q      |         |         |         |
  3+25       0.3930      1.52  |  Q      |         |         |         |
  3+30       0.4036      1.53  |  QV     |         |         |         |
  3+35       0.4141      1.53  |  QV     |         |         |         |
  3+40       0.4247      1.53  |  QV     |         |         |         |
  3+45       0.4352      1.54  |  QV     |         |         |         |
  3+50       0.4458      1.54  |  QV     |         |         |         |
  3+55       0.4565      1.54  |  QV     |         |         |         |
  4+ 0       0.4671      1.55  |  QV     |         |         |         |
  4+ 5       0.4778      1.55  |  QV     |         |         |         |
  4+10       0.4885      1.55  |  QV     |         |         |         |
  4+15       0.4992      1.56  |  QV     |         |         |         |
  4+20       0.5099      1.56  |  Q V    |         |         |         |
  4+25       0.5207      1.56  |  Q V    |         |         |         |
  4+30       0.5315      1.56  |  Q V    |         |         |         |
  4+35       0.5422      1.57  |  Q V    |         |         |         |
  4+40       0.5531      1.57  |  Q V    |         |         |         |
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 4+45      0.5639      1.57  |  Q V    |         |         |         |
 4+50      0.5748      1.58  |  Q V    |         |         |         |
 4+55      0.5857      1.58  |  Q V    |         |         |         |
 5+ 0      0.5966      1.58  |  Q V    |         |         |         |
 5+ 5      0.6075      1.59  |  Q  V   |         |         |         |
 5+10      0.6185      1.59  |  Q  V   |         |         |         |
 5+15      0.6295      1.60  |  Q  V   |         |         |         |
 5+20      0.6405      1.60  |  Q  V   |         |         |         |
 5+25      0.6515      1.60  |  Q  V   |         |         |         |
 5+30      0.6626      1.61  |  Q  V   |         |         |         |
 5+35      0.6737      1.61  |  Q  V   |         |         |         |
 5+40      0.6848      1.61  |  Q  V   |         |         |         |
 5+45      0.6959      1.62  |  Q  V   |         |         |         |
 5+50      0.7071      1.62  |  Q   V  |         |         |         |
 5+55      0.7183      1.62  |  Q   V  |         |         |         |
 6+ 0      0.7295      1.63  |  Q   V  |         |         |         |
 6+ 5      0.7407      1.63  |  Q   V  |         |         |         |
 6+10      0.7520      1.64  |  Q   V  |         |         |         |
 6+15      0.7633      1.64  |  Q   V  |         |         |         |
 6+20      0.7746      1.64  |  Q   V  |         |         |         |
 6+25      0.7860      1.65  |  Q   V  |         |         |         |
 6+30      0.7973      1.65  |  Q   V  |         |         |         |
 6+35      0.8088      1.66  |  Q    V |         |         |         |
 6+40      0.8202      1.66  |  Q    V |         |         |         |
 6+45      0.8317      1.67  |  Q    V |         |         |         |
 6+50      0.8432      1.67  |  Q    V |         |         |         |
 6+55      0.8547      1.67  |  Q    V |         |         |         |
 7+ 0      0.8662      1.68  |  Q    V |         |         |         |
 7+ 5      0.8778      1.68  |  Q    V |         |         |         |
 7+10      0.8895      1.69  |  Q    V |         |         |         |
 7+15      0.9011      1.69  |  Q    V |         |         |         |
 7+20      0.9128      1.70  |  Q     V|         |         |         |
 7+25      0.9245      1.70  |  Q     V|         |         |         |
 7+30      0.9362      1.71  |  Q     V|         |         |         |
 7+35      0.9480      1.71  |  Q     V|         |         |         |
 7+40      0.9598      1.72  |  Q     V|         |         |         |
 7+45      0.9717      1.72  |  Q     V|         |         |         |
 7+50      0.9836      1.72  |  Q     V|         |         |         |
 7+55      0.9955      1.73  |  Q     V|         |         |         |
 8+ 0      1.0074      1.74  |  Q      V         |         |         |
 8+ 5      1.0194      1.74  |  Q      V         |         |         |
 8+10      1.0314      1.75  |  Q      V         |         |         |
 8+15      1.0435      1.75  |  Q      V         |         |         |
 8+20      1.0556      1.76  |  Q      V         |         |         |
 8+25      1.0677      1.76  |  Q      V         |         |         |
 8+30      1.0799      1.77  |  Q      V         |         |         |
 8+35      1.0921      1.77  |  Q      V         |         |         |
 8+40      1.1043      1.78  |  Q      V         |         |         |
 8+45      1.1166      1.78  |  Q      |V        |         |         |
 8+50      1.1290      1.79  |  Q      |V        |         |         |
 8+55      1.1413      1.80  |  Q      |V        |         |         |
 9+ 0      1.1537      1.80  |  Q      |V        |         |         |
 9+ 5      1.1662      1.81  |  Q      |V        |         |         |
 9+10      1.1787      1.81  |  Q      |V        |         |         |
 9+15      1.1912      1.82  |  Q      |V        |         |         |
 9+20      1.2038      1.83  |  Q      |V        |         |         |
 9+25      1.2164      1.83  |  Q      | V       |         |         |
 9+30      1.2291      1.84  |  Q      | V       |         |         |
 9+35      1.2418      1.85  |  Q      | V       |         |         |
 9+40      1.2546      1.85  |  Q      | V       |         |         |
 9+45      1.2674      1.86  |  Q      | V       |         |         |
 9+50      1.2802      1.87  |  Q      | V       |         |         |
 9+55      1.2932      1.87  |  Q      | V       |         |         |
10+ 0      1.3061      1.88  |  Q      | V       |         |         |
10+ 5      1.3191      1.89  |  Q      |  V      |         |         |
10+10      1.3322      1.90  |  Q      |  V      |         |         |
10+15      1.3453      1.90  |  Q      |  V      |         |         |
10+20      1.3585      1.91  |  Q      |  V      |         |         |
10+25      1.3717      1.92  |  Q      |  V      |         |         |
10+30      1.3850      1.93  |  Q      |  V      |         |         |
10+35      1.3983      1.94  |  Q      |  V      |         |         |
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10+40       1.4117      1.94  |  Q      |   V     |         |         |
10+45       1.4251      1.95  |  Q      |   V     |         |         |
10+50       1.4387      1.96  |  Q      |   V     |         |         |
10+55       1.4522      1.97  |  Q      |   V     |         |         |
11+ 0       1.4659      1.98  |  Q      |   V     |         |         |
11+ 5       1.4796      1.99  |  Q      |   V     |         |         |
11+10       1.4933      2.00  |  Q      |   V     |         |         |
11+15       1.5072      2.01  |   Q     |   V     |         |         |
11+20       1.5211      2.02  |   Q     |    V    |         |         |
11+25       1.5350      2.03  |   Q     |    V    |         |         |
11+30       1.5491      2.04  |   Q     |    V    |         |         |
11+35       1.5632      2.05  |   Q     |    V    |         |         |
11+40       1.5774      2.06  |   Q     |    V    |         |         |
11+45       1.5916      2.07  |   Q     |    V    |         |         |
11+50       1.6060      2.08  |   Q     |    V    |         |         |
11+55       1.6204      2.09  |   Q     |     V   |         |         |
12+ 0       1.6349      2.11  |   Q     |     V   |         |         |
12+ 5       1.6494      2.10  |   Q     |     V   |         |         |
12+10       1.6634      2.03  |   Q     |     V   |         |         |
12+15       1.6768      1.95  |  Q      |     V   |         |         |
12+20       1.6901      1.92  |  Q      |     V   |         |         |
12+25       1.7033      1.92  |  Q      |     V   |         |         |
12+30       1.7165      1.92  |  Q      |      V  |         |         |
12+35       1.7298      1.93  |  Q      |      V  |         |         |
12+40       1.7432      1.94  |  Q      |      V  |         |         |
12+45       1.7567      1.96  |  Q      |      V  |         |         |
12+50       1.7703      1.98  |  Q      |      V  |         |         |
12+55       1.7840      1.99  |  Q      |      V  |         |         |
13+ 0       1.7979      2.01  |   Q     |      V  |         |         |
13+ 5       1.8119      2.03  |   Q     |       V |         |         |
13+10       1.8260      2.05  |   Q     |       V |         |         |
13+15       1.8403      2.08  |   Q     |       V |         |         |
13+20       1.8547      2.10  |   Q     |       V |         |         |
13+25       1.8694      2.12  |   Q     |       V |         |         |
13+30       1.8841      2.15  |   Q     |       V |         |         |
13+35       1.8991      2.17  |   Q     |       V |         |         |
13+40       1.9142      2.20  |   Q     |        V|         |         |
13+45       1.9296      2.23  |   Q     |        V|         |         |
13+50       1.9451      2.26  |   Q     |        V|         |         |
13+55       1.9609      2.29  |   Q     |        V|         |         |
14+ 0       1.9769      2.32  |   Q     |        V|         |         |
14+ 5       1.9931      2.35  |   Q     |        V|         |         |
14+10       2.0095      2.39  |   Q     |        V|         |         |
14+15       2.0262      2.43  |   Q     |         V         |         |
14+20       2.0432      2.47  |   Q     |         V         |         |
14+25       2.0605      2.51  |    Q    |         V         |         |
14+30       2.0781      2.56  |    Q    |         V         |         |
14+35       2.0961      2.61  |    Q    |         V         |         |
14+40       2.1144      2.66  |    Q    |         |V        |         |
14+45       2.1331      2.71  |    Q    |         |V        |         |
14+50       2.1522      2.77  |    Q    |         |V        |         |
14+55       2.1718      2.84  |    Q    |         |V        |         |
15+ 0       2.1918      2.91  |    Q    |         |V        |         |
15+ 5       2.2124      2.99  |    Q    |         |V        |         |
15+10       2.2336      3.08  |     Q   |         | V       |         |
15+15       2.2555      3.18  |     Q   |         | V       |         |
15+20       2.2782      3.29  |     Q   |         | V       |         |
15+25       2.3010      3.31  |     Q   |         | V       |         |
15+30       2.3210      2.91  |    Q    |         |  V      |         |
15+35       2.3376      2.40  |   Q     |         |  V      |         |
15+40       2.3538      2.35  |   Q     |         |  V      |         |
15+45       2.3707      2.46  |   Q     |         |  V      |         |
15+50       2.3894      2.72  |    Q    |         |  V      |         |
15+55       2.4114      3.18  |     Q   |         |  V      |         |
16+ 0       2.4397      4.11  |       Q |         |   V     |         |
16+ 5       2.4886      7.11  |         |   Q     |   V     |         |
16+10       2.5907     14.82  |         |         |    V   Q|         |
16+15       2.7018     16.13  |         |         |     V   | Q       |
16+20       2.7584      8.21  |         |     Q   |      V  |         |
16+25       2.7976      5.70  |         |Q        |      V  |         |
16+30       2.8301      4.71  |        Q|         |       V |         |
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16+35      2.8596     4.28  |       Q |         |       V |         |
16+40      2.8849     3.68  |      Q  |         |       V |         |
16+45      2.9079     3.34  |     Q   |         |       V |         |
16+50      2.9296     3.15  |     Q   |         |        V|         |
16+55      2.9503     3.02  |     Q   |         |        V|         |
17+ 0      2.9698     2.83  |    Q    |         |        V|         |
17+ 5      2.9882     2.67  |    Q    |         |        V|         |
17+10      3.0057     2.54  |    Q    |         |        V|         |
17+15      3.0227     2.46  |   Q     |         |         V         |
17+20      3.0391     2.38  |   Q     |         |         V         |
17+25      3.0550     2.31  |   Q     |         |         V         |
17+30      3.0705     2.25  |   Q     |         |         V         |
17+35      3.0856     2.19  |   Q     |         |         V         |
17+40      3.1003     2.14  |   Q     |         |         V         |
17+45      3.1147     2.09  |   Q     |         |         V         |
17+50      3.1288     2.05  |   Q     |         |         |V        |
17+55      3.1426     2.01  |   Q     |         |         |V        |
18+ 0      3.1562     1.97  |  Q      |         |         |V        |
18+ 5      3.1696     1.95  |  Q      |         |         |V        |
18+10      3.1833     2.00  |  Q      |         |         |V        |
18+15      3.1976     2.07  |   Q     |         |         |V        |
18+20      3.2119     2.08  |   Q     |         |         |V        |
18+25      3.2261     2.07  |   Q     |         |         | V       |
18+30      3.2403     2.06  |   Q     |         |         | V       |
18+35      3.2544     2.05  |   Q     |         |         | V       |
18+40      3.2684     2.03  |   Q     |         |         | V       |
18+45      3.2823     2.01  |   Q     |         |         | V       |
18+50      3.2960     1.99  |  Q      |         |         | V       |
18+55      3.3096     1.98  |  Q      |         |         | V       |
19+ 0      3.3231     1.96  |  Q      |         |         |  V      |
19+ 5      3.3365     1.94  |  Q      |         |         |  V      |
19+10      3.3497     1.92  |  Q      |         |         |  V      |
19+15      3.3629     1.91  |  Q      |         |         |  V      |
19+20      3.3759     1.89  |  Q      |         |         |  V      |
19+25      3.3888     1.88  |  Q      |         |         |  V      |
19+30      3.4017     1.86  |  Q      |         |         |  V      |
19+35      3.4144     1.85  |  Q      |         |         |  V      |
19+40      3.4271     1.84  |  Q      |         |         |   V     |
19+45      3.4396     1.82  |  Q      |         |         |   V     |
19+50      3.4521     1.81  |  Q      |         |         |   V     |
19+55      3.4645     1.80  |  Q      |         |         |   V     |
20+ 0      3.4768     1.79  |  Q      |         |         |   V     |
20+ 5      3.4890     1.78  |  Q      |         |         |   V     |
20+10      3.5012     1.76  |  Q      |         |         |   V     |
20+15      3.5133     1.75  |  Q      |         |         |   V     |
20+20      3.5253     1.74  |  Q      |         |         |    V    |
20+25      3.5372     1.73  |  Q      |         |         |    V    |
20+30      3.5491     1.72  |  Q      |         |         |    V    |
20+35      3.5609     1.71  |  Q      |         |         |    V    |
20+40      3.5726     1.70  |  Q      |         |         |    V    |
20+45      3.5843     1.69  |  Q      |         |         |    V    |
20+50      3.5959     1.68  |  Q      |         |         |    V    |
20+55      3.6074     1.68  |  Q      |         |         |    V    |
21+ 0      3.6189     1.67  |  Q      |         |         |    V    |
21+ 5      3.6303     1.66  |  Q      |         |         |     V   |
21+10      3.6417     1.65  |  Q      |         |         |     V   |
21+15      3.6530     1.64  |  Q      |         |         |     V   |
21+20      3.6642     1.63  |  Q      |         |         |     V   |
21+25      3.6754     1.63  |  Q      |         |         |     V   |
21+30      3.6866     1.62  |  Q      |         |         |     V   |
21+35      3.6977     1.61  |  Q      |         |         |     V   |
21+40      3.7087     1.60  |  Q      |         |         |     V   |
21+45      3.7197     1.60  |  Q      |         |         |     V   |
21+50      3.7307     1.59  |  Q      |         |         |      V  |
21+55      3.7416     1.58  |  Q      |         |         |      V  |
22+ 0      3.7525     1.58  |  Q      |         |         |      V  |
22+ 5      3.7633     1.57  |  Q      |         |         |      V  |
22+10      3.7740     1.56  |  Q      |         |         |      V  |
22+15      3.7848     1.56  |  Q      |         |         |      V  |
22+20      3.7954     1.55  |  Q      |         |         |      V  |
22+25      3.8061     1.54  |  Q      |         |         |      V  |
```

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   22+30       3.8167      1.54  |  Q      |         |         |      V  |
   22+35       3.8272      1.53  |  Q      |         |         |       V |
   22+40       3.8377      1.53  |  Q      |         |         |       V |
   22+45       3.8482      1.52  |  Q      |         |         |       V |
   22+50       3.8586      1.52  |  Q      |         |         |       V |
   22+55       3.8690      1.51  |  Q      |         |         |       V |
   23+ 0       3.8794      1.50  |  Q      |         |         |       V |
   23+ 5       3.8897      1.50  | Q       |         |         |       V |
   23+10       3.9000      1.49  | Q       |         |         |       V |
   23+15       3.9102      1.49  | Q       |         |         |       V |
   23+20       3.9205      1.48  | Q       |         |         |       V |
   23+25       3.9306      1.48  | Q       |         |         |        V|
   23+30       3.9408      1.47  | Q       |         |         |        V|
   23+35       3.9509      1.47  | Q       |         |         |        V|
   23+40       3.9610      1.46  | Q       |         |         |        V|
   23+45       3.9710      1.46  | Q       |         |         |        V|
   23+50       3.9810      1.45  | Q       |         |         |        V|
   23+55       3.9910      1.45  | Q       |         |         |        V|
   24+ 0       4.0009      1.44  | Q       |         |         |        V|
   24+ 5       4.0103      1.37  | Q       |         |         |        V|
   24+10       4.0169      0.95  |Q        |         |         |        V|
   24+15       4.0199      0.44  Q         |         |         |        V|
   24+20       4.0217      0.26  Q         |         |         |        V|
   24+25       4.0227      0.15  Q         |         |         |        V|
   24+30       4.0233      0.08  Q         |         |         |        V|
   24+35       4.0236      0.04  Q         |         |         |        V|
   24+40       4.0238      0.03  Q         |         |         |        V|
   24+45       4.0239      0.02  Q         |         |         |        V|
   24+50       4.0240      0.01  Q         |         |         |        V|
   24+55       4.0240      0.00  Q         |         |         |        V|
   25+ 0       4.0240      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'C' – 2 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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                Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
2 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 2

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.53            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.53            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.53           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             6.53            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.53            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.53           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      47.4          6.53      1.000     0.840    1.000    0.840

Area-averaged adjusted loss rate Fm (In/Hr) =  0.840

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
6.53	1.000	67.0	47.4	11.10	0.062

Area-averaged catchment yield fraction, Y = 0.062
Area-averaged low loss fraction, Yb = 0.938
User entry of time of concentration = 0.225 (hours)
++
Watershed area = 6.53(Ac.)
Catchment Lag time = 0.180 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 46.2963
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.840(In/Hr)
Average low loss rate fraction (Yb) = 0.938 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 6.53(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.309(In)
30-minute factor = 1.000 Adjusted rainfall = 0.528(In)
1-hour factor = 1.000 Adjusted rainfall = 0.650(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 78.97 (CFS))	
1	3.841	3.033
2	20.125	12.860
3	58.137	30.019
4	74.610	13.009
5	83.494	7.016
6	89.354	4.628
7	93.374	3.174
8	96.031	2.098
9	97.668	1.293
10	98.374	0.558
11	98.857	0.382
12	99.195	0.267
13	99.529	0.264
14	99.800	0.214
15	99.943	0.113
16	100.000	0.045

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3086	0.3086
2	0.3799	0.0713
3	0.4290	0.0491
4	0.4677	0.0387
5	0.5001	0.0324
6	0.5282	0.0281
7	0.5532	0.0250
8	0.5758	0.0226
9	0.5965	0.0207
10	0.6157	0.0192

11	0.6336	0.0179
12	0.6503	0.0168
13	0.6838	0.0335
14	0.7163	0.0325
15	0.7480	0.0317
16	0.7789	0.0309
17	0.8091	0.0302
18	0.8386	0.0295
19	0.8675	0.0289
20	0.8959	0.0284
21	0.9237	0.0278
22	0.9510	0.0273
23	0.9779	0.0269
24	1.0044	0.0265
25	1.0304	0.0260
26	1.0561	0.0257
27	1.0814	0.0253
28	1.1063	0.0249
29	1.1309	0.0246
30	1.1552	0.0243
31	1.1792	0.0240
32	1.2029	0.0237
33	1.2264	0.0234
34	1.2495	0.0232
35	1.2725	0.0229
36	1.2951	0.0227
37	1.3176	0.0224
38	1.3398	0.0222
39	1.3618	0.0220
40	1.3836	0.0218
41	1.4052	0.0216
42	1.4265	0.0214
43	1.4477	0.0212
44	1.4688	0.0210
45	1.4896	0.0208
46	1.5103	0.0207
47	1.5308	0.0205
48	1.5511	0.0203
49	1.5713	0.0202
50	1.5913	0.0200
51	1.6112	0.0199
52	1.6309	0.0197
53	1.6505	0.0196
54	1.6699	0.0195
55	1.6893	0.0193
56	1.7085	0.0192
57	1.7275	0.0191
58	1.7464	0.0189
59	1.7653	0.0188
60	1.7840	0.0187
61	1.8025	0.0186
62	1.8210	0.0185
63	1.8394	0.0184
64	1.8576	0.0182
65	1.8758	0.0181
66	1.8938	0.0180
67	1.9117	0.0179
68	1.9296	0.0178
69	1.9473	0.0177
70	1.9650	0.0176
71	1.9825	0.0175
72	2.0000	0.0175
73	2.0138	0.0138
74	2.0275	0.0137
75	2.0412	0.0137
76	2.0548	0.0136
77	2.0682	0.0135
78	2.0816	0.0134
79	2.0949	0.0133
80	2.1081	0.0132
81	2.1213	0.0131

82	2.1343	0.0131
83	2.1473	0.0130
84	2.1602	0.0129
85	2.1730	0.0128
86	2.1858	0.0127
87	2.1984	0.0127
88	2.2110	0.0126
89	2.2236	0.0125
90	2.2360	0.0125
91	2.2484	0.0124
92	2.2607	0.0123
93	2.2730	0.0123
94	2.2852	0.0122
95	2.2973	0.0121
96	2.3094	0.0121
97	2.3214	0.0120
98	2.3333	0.0119
99	2.3452	0.0119
100	2.3570	0.0118
101	2.3687	0.0118
102	2.3804	0.0117
103	2.3921	0.0116
104	2.4037	0.0116
105	2.4152	0.0115
106	2.4267	0.0115
107	2.4381	0.0114
108	2.4494	0.0114
109	2.4608	0.0113
110	2.4720	0.0113
111	2.4832	0.0112
112	2.4944	0.0112
113	2.5055	0.0111
114	2.5166	0.0111
115	2.5276	0.0110
116	2.5385	0.0110
117	2.5495	0.0109
118	2.5603	0.0109
119	2.5712	0.0108
120	2.5819	0.0108
121	2.5927	0.0107
122	2.6034	0.0107
123	2.6140	0.0106
124	2.6246	0.0106
125	2.6352	0.0106
126	2.6457	0.0105
127	2.6562	0.0105
128	2.6666	0.0104
129	2.6770	0.0104
130	2.6874	0.0104
131	2.6977	0.0103
132	2.7080	0.0103
133	2.7182	0.0102
134	2.7284	0.0102
135	2.7386	0.0102
136	2.7487	0.0101
137	2.7588	0.0101
138	2.7688	0.0101
139	2.7788	0.0100
140	2.7888	0.0100
141	2.7988	0.0099
142	2.8087	0.0099
143	2.8185	0.0099
144	2.8284	0.0098
145	2.8382	0.0098
146	2.8480	0.0098
147	2.8577	0.0097
148	2.8674	0.0097
149	2.8771	0.0097
150	2.8867	0.0096
151	2.8963	0.0096
152	2.9059	0.0096

153	2.9154	0.0095
154	2.9249	0.0095
155	2.9344	0.0095
156	2.9439	0.0095
157	2.9533	0.0094
158	2.9627	0.0094
159	2.9721	0.0094
160	2.9814	0.0093
161	2.9907	0.0093
162	3.0000	0.0093
163	3.0092	0.0092
164	3.0184	0.0092
165	3.0276	0.0092
166	3.0368	0.0092
167	3.0459	0.0091
168	3.0550	0.0091
169	3.0641	0.0091
170	3.0731	0.0091
171	3.0822	0.0090
172	3.0912	0.0090
173	3.1001	0.0090
174	3.1091	0.0089
175	3.1180	0.0089
176	3.1269	0.0089
177	3.1358	0.0089
178	3.1446	0.0088
179	3.1534	0.0088
180	3.1622	0.0088
181	3.1710	0.0088
182	3.1798	0.0087
183	3.1885	0.0087
184	3.1972	0.0087
185	3.2059	0.0087
186	3.2145	0.0087
187	3.2231	0.0086
188	3.2317	0.0086
189	3.2403	0.0086
190	3.2489	0.0086
191	3.2574	0.0085
192	3.2659	0.0085
193	3.2744	0.0085
194	3.2829	0.0085
195	3.2914	0.0085
196	3.2998	0.0084
197	3.3082	0.0084
198	3.3166	0.0084
199	3.3250	0.0084
200	3.3333	0.0083
201	3.3416	0.0083
202	3.3499	0.0083
203	3.3582	0.0083
204	3.3665	0.0083
205	3.3747	0.0082
206	3.3829	0.0082
207	3.3911	0.0082
208	3.3993	0.0082
209	3.4075	0.0082
210	3.4156	0.0081
211	3.4237	0.0081
212	3.4318	0.0081
213	3.4399	0.0081
214	3.4480	0.0081
215	3.4560	0.0080
216	3.4641	0.0080
217	3.4721	0.0080
218	3.4801	0.0080
219	3.4880	0.0080
220	3.4960	0.0080
221	3.5039	0.0079
222	3.5118	0.0079
223	3.5197	0.0079

224	3.5276	0.0079
225	3.5355	0.0079
226	3.5433	0.0078
227	3.5512	0.0078
228	3.5590	0.0078
229	3.5668	0.0078
230	3.5746	0.0078
231	3.5823	0.0078
232	3.5901	0.0077
233	3.5978	0.0077
234	3.6055	0.0077
235	3.6132	0.0077
236	3.6209	0.0077
237	3.6286	0.0077
238	3.6362	0.0076
239	3.6438	0.0076
240	3.6514	0.0076
241	3.6590	0.0076
242	3.6666	0.0076
243	3.6742	0.0076
244	3.6818	0.0076
245	3.6893	0.0075
246	3.6968	0.0075
247	3.7043	0.0075
248	3.7118	0.0075
249	3.7193	0.0075
250	3.7267	0.0075
251	3.7342	0.0074
252	3.7416	0.0074
253	3.7490	0.0074
254	3.7564	0.0074
255	3.7638	0.0074
256	3.7712	0.0074
257	3.7786	0.0074
258	3.7859	0.0073
259	3.7932	0.0073
260	3.8006	0.0073
261	3.8079	0.0073
262	3.8151	0.0073
263	3.8224	0.0073
264	3.8297	0.0073
265	3.8369	0.0072
266	3.8442	0.0072
267	3.8514	0.0072
268	3.8586	0.0072
269	3.8658	0.0072
270	3.8729	0.0072
271	3.8801	0.0072
272	3.8873	0.0072
273	3.8944	0.0071
274	3.9015	0.0071
275	3.9086	0.0071
276	3.9157	0.0071
277	3.9228	0.0071
278	3.9299	0.0071
279	3.9370	0.0071
280	3.9440	0.0070
281	3.9511	0.0070
282	3.9581	0.0070
283	3.9651	0.0070
284	3.9721	0.0070
285	3.9791	0.0070
286	3.9861	0.0070
287	3.9930	0.0070
288	4.0000	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0065	0.0004

2	0.0070	0.0065	0.0004
3	0.0070	0.0066	0.0004
4	0.0070	0.0066	0.0004
5	0.0070	0.0066	0.0004
6	0.0070	0.0066	0.0004
7	0.0071	0.0066	0.0004
8	0.0071	0.0066	0.0004
9	0.0071	0.0067	0.0004
10	0.0071	0.0067	0.0004
11	0.0071	0.0067	0.0004
12	0.0072	0.0067	0.0004
13	0.0072	0.0067	0.0004
14	0.0072	0.0067	0.0004
15	0.0072	0.0068	0.0004
16	0.0072	0.0068	0.0004
17	0.0073	0.0068	0.0004
18	0.0073	0.0068	0.0004
19	0.0073	0.0069	0.0004
20	0.0073	0.0069	0.0005
21	0.0073	0.0069	0.0005
22	0.0074	0.0069	0.0005
23	0.0074	0.0069	0.0005
24	0.0074	0.0069	0.0005
25	0.0074	0.0070	0.0005
26	0.0074	0.0070	0.0005
27	0.0075	0.0070	0.0005
28	0.0075	0.0070	0.0005
29	0.0075	0.0071	0.0005
30	0.0075	0.0071	0.0005
31	0.0076	0.0071	0.0005
32	0.0076	0.0071	0.0005
33	0.0076	0.0071	0.0005
34	0.0076	0.0072	0.0005
35	0.0077	0.0072	0.0005
36	0.0077	0.0072	0.0005
37	0.0077	0.0072	0.0005
38	0.0077	0.0073	0.0005
39	0.0078	0.0073	0.0005
40	0.0078	0.0073	0.0005
41	0.0078	0.0073	0.0005
42	0.0078	0.0073	0.0005
43	0.0079	0.0074	0.0005
44	0.0079	0.0074	0.0005
45	0.0079	0.0074	0.0005
46	0.0079	0.0074	0.0005
47	0.0080	0.0075	0.0005
48	0.0080	0.0075	0.0005
49	0.0080	0.0075	0.0005
50	0.0080	0.0076	0.0005
51	0.0081	0.0076	0.0005
52	0.0081	0.0076	0.0005
53	0.0081	0.0076	0.0005
54	0.0082	0.0077	0.0005
55	0.0082	0.0077	0.0005
56	0.0082	0.0077	0.0005
57	0.0083	0.0078	0.0005
58	0.0083	0.0078	0.0005
59	0.0083	0.0078	0.0005
60	0.0083	0.0078	0.0005
61	0.0084	0.0079	0.0005
62	0.0084	0.0079	0.0005
63	0.0085	0.0079	0.0005
64	0.0085	0.0080	0.0005
65	0.0085	0.0080	0.0005
66	0.0085	0.0080	0.0005
67	0.0086	0.0081	0.0005
68	0.0086	0.0081	0.0005
69	0.0087	0.0081	0.0005
70	0.0087	0.0081	0.0005
71	0.0087	0.0082	0.0005
72	0.0087	0.0082	0.0005

73	0.0088	0.0083	0.0005
74	0.0088	0.0083	0.0005
75	0.0089	0.0083	0.0005
76	0.0089	0.0083	0.0005
77	0.0089	0.0084	0.0006
78	0.0090	0.0084	0.0006
79	0.0090	0.0085	0.0006
80	0.0091	0.0085	0.0006
81	0.0091	0.0085	0.0006
82	0.0091	0.0086	0.0006
83	0.0092	0.0086	0.0006
84	0.0092	0.0086	0.0006
85	0.0093	0.0087	0.0006
86	0.0093	0.0087	0.0006
87	0.0094	0.0088	0.0006
88	0.0094	0.0088	0.0006
89	0.0095	0.0089	0.0006
90	0.0095	0.0089	0.0006
91	0.0095	0.0090	0.0006
92	0.0096	0.0090	0.0006
93	0.0096	0.0090	0.0006
94	0.0097	0.0091	0.0006
95	0.0097	0.0091	0.0006
96	0.0098	0.0092	0.0006
97	0.0098	0.0092	0.0006
98	0.0099	0.0093	0.0006
99	0.0099	0.0093	0.0006
100	0.0100	0.0094	0.0006
101	0.0101	0.0094	0.0006
102	0.0101	0.0095	0.0006
103	0.0102	0.0095	0.0006
104	0.0102	0.0096	0.0006
105	0.0103	0.0096	0.0006
106	0.0103	0.0097	0.0006
107	0.0104	0.0098	0.0006
108	0.0104	0.0098	0.0006
109	0.0105	0.0099	0.0006
110	0.0106	0.0099	0.0007
111	0.0106	0.0100	0.0007
112	0.0107	0.0100	0.0007
113	0.0108	0.0101	0.0007
114	0.0108	0.0102	0.0007
115	0.0109	0.0102	0.0007
116	0.0110	0.0103	0.0007
117	0.0111	0.0104	0.0007
118	0.0111	0.0104	0.0007
119	0.0112	0.0105	0.0007
120	0.0113	0.0106	0.0007
121	0.0114	0.0107	0.0007
122	0.0114	0.0107	0.0007
123	0.0115	0.0108	0.0007
124	0.0116	0.0109	0.0007
125	0.0117	0.0110	0.0007
126	0.0118	0.0110	0.0007
127	0.0119	0.0111	0.0007
128	0.0119	0.0112	0.0007
129	0.0121	0.0113	0.0007
130	0.0121	0.0114	0.0007
131	0.0123	0.0115	0.0008
132	0.0123	0.0116	0.0008
133	0.0125	0.0117	0.0008
134	0.0125	0.0118	0.0008
135	0.0127	0.0119	0.0008
136	0.0127	0.0120	0.0008
137	0.0129	0.0121	0.0008
138	0.0130	0.0122	0.0008
139	0.0131	0.0123	0.0008
140	0.0132	0.0124	0.0008
141	0.0134	0.0126	0.0008
142	0.0135	0.0126	0.0008
143	0.0137	0.0128	0.0008

144	0.0137	0.0129	0.0008
145	0.0175	0.0164	0.0011
146	0.0175	0.0165	0.0011
147	0.0177	0.0166	0.0011
148	0.0178	0.0167	0.0011
149	0.0180	0.0169	0.0011
150	0.0181	0.0170	0.0011
151	0.0184	0.0172	0.0011
152	0.0185	0.0173	0.0011
153	0.0187	0.0175	0.0012
154	0.0188	0.0177	0.0012
155	0.0191	0.0179	0.0012
156	0.0192	0.0180	0.0012
157	0.0195	0.0183	0.0012
158	0.0196	0.0184	0.0012
159	0.0199	0.0187	0.0012
160	0.0200	0.0188	0.0012
161	0.0203	0.0191	0.0013
162	0.0205	0.0192	0.0013
163	0.0208	0.0196	0.0013
164	0.0210	0.0197	0.0013
165	0.0214	0.0201	0.0013
166	0.0216	0.0203	0.0013
167	0.0220	0.0206	0.0014
168	0.0222	0.0208	0.0014
169	0.0227	0.0213	0.0014
170	0.0229	0.0215	0.0014
171	0.0234	0.0220	0.0014
172	0.0237	0.0223	0.0015
173	0.0243	0.0228	0.0015
174	0.0246	0.0231	0.0015
175	0.0253	0.0237	0.0016
176	0.0257	0.0241	0.0016
177	0.0265	0.0248	0.0016
178	0.0269	0.0252	0.0017
179	0.0278	0.0261	0.0017
180	0.0284	0.0266	0.0017
181	0.0295	0.0277	0.0018
182	0.0302	0.0283	0.0019
183	0.0317	0.0297	0.0019
184	0.0325	0.0305	0.0020
185	0.0168	0.0157	0.0010
186	0.0179	0.0168	0.0011
187	0.0207	0.0194	0.0013
188	0.0226	0.0212	0.0014
189	0.0281	0.0264	0.0017
190	0.0324	0.0304	0.0020
191	0.0491	0.0461	0.0030
192	0.0713	0.0669	0.0044
193	0.3086	0.0700	0.2386
194	0.0387	0.0363	0.0024
195	0.0250	0.0235	0.0015
196	0.0192	0.0180	0.0012
197	0.0335	0.0314	0.0021
198	0.0309	0.0290	0.0019
199	0.0289	0.0271	0.0018
200	0.0273	0.0257	0.0017
201	0.0260	0.0244	0.0016
202	0.0249	0.0234	0.0015
203	0.0240	0.0225	0.0015
204	0.0232	0.0217	0.0014
205	0.0224	0.0211	0.0014
206	0.0218	0.0204	0.0013
207	0.0212	0.0199	0.0013
208	0.0207	0.0194	0.0013
209	0.0202	0.0189	0.0012
210	0.0197	0.0185	0.0012
211	0.0193	0.0181	0.0012
212	0.0189	0.0178	0.0012
213	0.0186	0.0174	0.0011
214	0.0182	0.0171	0.0011

215	0.0179	0.0168	0.0011
216	0.0176	0.0166	0.0011
217	0.0138	0.0130	0.0009
218	0.0136	0.0127	0.0008
219	0.0133	0.0125	0.0008
220	0.0131	0.0123	0.0008
221	0.0128	0.0120	0.0008
222	0.0126	0.0118	0.0008
223	0.0124	0.0116	0.0008
224	0.0122	0.0114	0.0008
225	0.0120	0.0113	0.0007
226	0.0118	0.0111	0.0007
227	0.0116	0.0109	0.0007
228	0.0115	0.0108	0.0007
229	0.0113	0.0106	0.0007
230	0.0112	0.0105	0.0007
231	0.0110	0.0103	0.0007
232	0.0109	0.0102	0.0007
233	0.0107	0.0101	0.0007
234	0.0106	0.0100	0.0007
235	0.0105	0.0098	0.0006
236	0.0104	0.0097	0.0006
237	0.0102	0.0096	0.0006
238	0.0101	0.0095	0.0006
239	0.0100	0.0094	0.0006
240	0.0099	0.0093	0.0006
241	0.0098	0.0092	0.0006
242	0.0097	0.0091	0.0006
243	0.0096	0.0090	0.0006
244	0.0095	0.0089	0.0006
245	0.0094	0.0088	0.0006
246	0.0093	0.0088	0.0006
247	0.0092	0.0087	0.0006
248	0.0092	0.0086	0.0006
249	0.0091	0.0085	0.0006
250	0.0090	0.0084	0.0006
251	0.0089	0.0084	0.0005
252	0.0088	0.0083	0.0005
253	0.0088	0.0082	0.0005
254	0.0087	0.0082	0.0005
255	0.0086	0.0081	0.0005
256	0.0086	0.0080	0.0005
257	0.0085	0.0080	0.0005
258	0.0084	0.0079	0.0005
259	0.0084	0.0078	0.0005
260	0.0083	0.0078	0.0005
261	0.0082	0.0077	0.0005
262	0.0082	0.0077	0.0005
263	0.0081	0.0076	0.0005
264	0.0081	0.0076	0.0005
265	0.0080	0.0075	0.0005
266	0.0080	0.0075	0.0005
267	0.0079	0.0074	0.0005
268	0.0078	0.0074	0.0005
269	0.0078	0.0073	0.0005
270	0.0077	0.0073	0.0005
271	0.0077	0.0072	0.0005
272	0.0076	0.0072	0.0005
273	0.0076	0.0071	0.0005
274	0.0076	0.0071	0.0005
275	0.0075	0.0070	0.0005
276	0.0075	0.0070	0.0005
277	0.0074	0.0070	0.0005
278	0.0074	0.0069	0.0005
279	0.0073	0.0069	0.0005
280	0.0073	0.0068	0.0004
281	0.0072	0.0068	0.0004
282	0.0072	0.0068	0.0004
283	0.0072	0.0067	0.0004
284	0.0071	0.0067	0.0004
285	0.0071	0.0067	0.0004

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      286              0.0070           0.0066              0.0004
      287              0.0070           0.0066              0.0004
      288              0.0070           0.0065              0.0004
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      3.53(In)
      Total effective rainfall =      0.47(In)
      Peak flow rate in flood hydrograph =      7.30(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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      0.00  Q         |         |         |         |
  0+10       0.0001      0.01  Q         |         |         |         |
  0+15       0.0002      0.02  Q         |         |         |         |
  0+20       0.0004      0.03  Q         |         |         |         |
  0+25       0.0006      0.03  Q         |         |         |         |
  0+30       0.0008      0.03  Q         |         |         |         |
  0+35       0.0010      0.03  Q         |         |         |         |
  0+40       0.0012      0.03  Q         |         |         |         |
  0+45       0.0014      0.03  Q         |         |         |         |
  0+50       0.0017      0.03  Q         |         |         |         |
  0+55       0.0019      0.03  Q         |         |         |         |
  1+ 0       0.0021      0.03  Q         |         |         |         |
  1+ 5       0.0024      0.03  Q         |         |         |         |
  1+10       0.0026      0.03  Q         |         |         |         |
  1+15       0.0029      0.03  Q         |         |         |         |
  1+20       0.0031      0.03  Q         |         |         |         |
  1+25       0.0033      0.03  Q         |         |         |         |
  1+30       0.0036      0.04  Q         |         |         |         |
  1+35       0.0038      0.04  Q         |         |         |         |
  1+40       0.0041      0.04  Q         |         |         |         |
  1+45       0.0043      0.04  Q         |         |         |         |
  1+50       0.0046      0.04  Q         |         |         |         |
  1+55       0.0048      0.04  Q         |         |         |         |
  2+ 0       0.0051      0.04  Q         |         |         |         |
  2+ 5       0.0053      0.04  Q         |         |         |         |
  2+10       0.0055      0.04  Q         |         |         |         |
  2+15       0.0058      0.04  Q         |         |         |         |
  2+20       0.0060      0.04  Q         |         |         |         |
  2+25       0.0063      0.04  Q         |         |         |         |
  2+30       0.0065      0.04  QV        |         |         |         |
  2+35       0.0068      0.04  QV        |         |         |         |
  2+40       0.0070      0.04  QV        |         |         |         |
  2+45       0.0073      0.04  QV        |         |         |         |
  2+50       0.0075      0.04  QV        |         |         |         |
  2+55       0.0078      0.04  QV        |         |         |         |
  3+ 0       0.0081      0.04  QV        |         |         |         |
  3+ 5       0.0083      0.04  QV        |         |         |         |
  3+10       0.0086      0.04  QV        |         |         |         |
  3+15       0.0088      0.04  QV        |         |         |         |
  3+20       0.0091      0.04  QV        |         |         |         |
  3+25       0.0093      0.04  QV        |         |         |         |
  3+30       0.0096      0.04  QV        |         |         |         |
  3+35       0.0099      0.04  QV        |         |         |         |
  3+40       0.0101      0.04  QV        |         |         |         |
  3+45       0.0104      0.04  QV        |         |         |         |
  3+50       0.0107      0.04  QV        |         |         |         |
  3+55       0.0109      0.04  QV        |         |         |         |
  4+ 0       0.0112      0.04  QV        |         |         |         |
  4+ 5       0.0114      0.04  QV        |         |         |         |
  4+10       0.0117      0.04  QV        |         |         |         |
  4+15       0.0120      0.04  QV        |         |         |         |
  4+20       0.0123      0.04  QV        |         |         |         |
  4+25       0.0125      0.04  QV        |         |         |         |
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4+30	0.0128	0.04	Q	V			
4+35	0.0131	0.04	Q	V			
4+40	0.0133	0.04	Q	V			
4+45	0.0136	0.04	Q	V			
4+50	0.0139	0.04	Q	V			
4+55	0.0142	0.04	Q	V			
5+ 0	0.0144	0.04	Q	V			
5+ 5	0.0147	0.04	Q	V			
5+10	0.0150	0.04	Q	V			
5+15	0.0153	0.04	Q	V			
5+20	0.0156	0.04	Q	V			
5+25	0.0158	0.04	Q	V			
5+30	0.0161	0.04	Q	V			
5+35	0.0164	0.04	Q	V			
5+40	0.0167	0.04	Q	V			
5+45	0.0170	0.04	Q	V			
5+50	0.0173	0.04	Q	V			
5+55	0.0175	0.04	Q	V			
6+ 0	0.0178	0.04	Q	V			
6+ 5	0.0181	0.04	Q	V			
6+10	0.0184	0.04	Q	V			
6+15	0.0187	0.04	Q	V			
6+20	0.0190	0.04	Q	V			
6+25	0.0193	0.04	Q	V			
6+30	0.0196	0.04	Q	V			
6+35	0.0199	0.04	Q	V			
6+40	0.0202	0.04	Q	V			
6+45	0.0205	0.04	Q	V			
6+50	0.0208	0.04	Q	V			
6+55	0.0211	0.04	Q	V			
7+ 0	0.0214	0.04	Q	V			
7+ 5	0.0217	0.04	Q	V			
7+10	0.0220	0.04	Q	V			
7+15	0.0223	0.04	Q	V			
7+20	0.0226	0.05	Q	V			
7+25	0.0230	0.05	Q	V			
7+30	0.0233	0.05	Q	V			
7+35	0.0236	0.05	Q	V			
7+40	0.0239	0.05	Q	V			
7+45	0.0242	0.05	Q	V			
7+50	0.0245	0.05	Q	V			
7+55	0.0249	0.05	Q	V			
8+ 0	0.0252	0.05	Q	V			
8+ 5	0.0255	0.05	Q	V			
8+10	0.0258	0.05	Q	V			
8+15	0.0262	0.05	Q	V			
8+20	0.0265	0.05	Q	V			
8+25	0.0268	0.05	Q	V			
8+30	0.0272	0.05	Q	V			
8+35	0.0275	0.05	Q	V			
8+40	0.0278	0.05	Q	V			
8+45	0.0282	0.05	Q	V			
8+50	0.0285	0.05	Q	V			
8+55	0.0288	0.05	Q	V			
9+ 0	0.0292	0.05	Q	V			
9+ 5	0.0295	0.05	Q	V			
9+10	0.0299	0.05	Q	V			
9+15	0.0302	0.05	Q	V			
9+20	0.0306	0.05	Q	V			
9+25	0.0309	0.05	Q	V			
9+30	0.0313	0.05	Q	V			
9+35	0.0317	0.05	Q	V			
9+40	0.0320	0.05	Q	V			
9+45	0.0324	0.05	Q	V			
9+50	0.0327	0.05	Q	V			
9+55	0.0331	0.05	Q	V			
10+ 0	0.0335	0.05	Q	V			
10+ 5	0.0339	0.05	Q	V			
10+10	0.0342	0.05	Q	V			
10+15	0.0346	0.05	Q	V			
10+20	0.0350	0.06	Q	V			

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10+25       0.0354      0.06  Q    V    |          |          |          |
10+30       0.0358      0.06  Q    V    |          |          |          |
10+35       0.0361      0.06  Q    V    |          |          |          |
10+40       0.0365      0.06  Q    V    |          |          |          |
10+45       0.0369      0.06  Q    V    |          |          |          |
10+50       0.0373      0.06  Q    V    |          |          |          |
10+55       0.0377      0.06  Q    V    |          |          |          |
11+ 0       0.0381      0.06  Q     V   |          |          |          |
11+ 5       0.0385      0.06  Q     V   |          |          |          |
11+10       0.0390      0.06  Q     V   |          |          |          |
11+15       0.0394      0.06  Q     V   |          |          |          |
11+20       0.0398      0.06  Q     V   |          |          |          |
11+25       0.0402      0.06  Q     V   |          |          |          |
11+30       0.0406      0.06  Q     V   |          |          |          |
11+35       0.0411      0.06  Q     V   |          |          |          |
11+40       0.0415      0.06  Q     V   |          |          |          |
11+45       0.0419      0.06  Q     V   |          |          |          |
11+50       0.0424      0.06  Q     V   |          |          |          |
11+55       0.0428      0.06  Q     V   |          |          |          |
12+ 0       0.0433      0.07  Q     V   |          |          |          |
12+ 5       0.0437      0.07  Q     V   |          |          |          |
12+10       0.0442      0.07  Q     V   |          |          |          |
12+15       0.0447      0.08  Q      V  |          |          |          |
12+20       0.0453      0.08  Q      V  |          |          |          |
12+25       0.0458      0.08  Q      V  |          |          |          |
12+30       0.0464      0.08  Q      V  |          |          |          |
12+35       0.0470      0.09  Q      V  |          |          |          |
12+40       0.0476      0.09  Q      V  |          |          |          |
12+45       0.0482      0.09  Q      V  |          |          |          |
12+50       0.0488      0.09  Q      V  |          |          |          |
12+55       0.0495      0.09  Q      V  |          |          |          |
13+ 0       0.0501      0.09  Q      V  |          |          |          |
13+ 5       0.0507      0.09  Q       V |          |          |          |
13+10       0.0514      0.09  Q       V |          |          |          |
13+15       0.0520      0.09  Q       V |          |          |          |
13+20       0.0526      0.09  Q       V |          |          |          |
13+25       0.0533      0.10  Q       V |          |          |          |
13+30       0.0540      0.10  Q       V |          |          |          |
13+35       0.0546      0.10  Q       V |          |          |          |
13+40       0.0553      0.10  Q       V |          |          |          |
13+45       0.0560      0.10  Q       V |          |          |          |
13+50       0.0567      0.10  Q       V |          |          |          |
13+55       0.0574      0.10  Q        V|          |          |          |
14+ 0       0.0581      0.10  Q        V|          |          |          |
14+ 5       0.0589      0.11  Q        V|          |          |          |
14+10       0.0596      0.11  Q        V|          |          |          |
14+15       0.0603      0.11  Q        V|          |          |          |
14+20       0.0611      0.11  Q        V|          |          |          |
14+25       0.0619      0.11  Q        V|          |          |          |
14+30       0.0627      0.11  Q        V|          |          |          |
14+35       0.0635      0.12  Q         V          |          |          |
14+40       0.0643      0.12  Q         V          |          |          |
14+45       0.0651      0.12  Q         V          |          |          |
14+50       0.0660      0.12  Q         V          |          |          |
14+55       0.0668      0.13  Q         V          |          |          |
15+ 0       0.0677      0.13  Q         V          |          |          |
15+ 5       0.0686      0.13  Q         V          |          |          |
15+10       0.0696      0.14  Q         V          |          |          |
15+15       0.0705      0.14  Q         |V         |          |          |
15+20       0.0715      0.14  Q         |V         |          |          |
15+25       0.0725      0.15  Q         |V         |          |          |
15+30       0.0735      0.14  Q         |V         |          |          |
15+35       0.0742      0.11  Q         |V         |          |          |
15+40       0.0750      0.11  Q         |V         |          |          |
15+45       0.0757      0.11  Q         |V         |          |          |
15+50       0.0765      0.12  Q         | V        |          |          |
15+55       0.0774      0.13  Q         | V        |          |          |
16+ 0       0.0785      0.16  Q         | V        |          |          |
16+ 5       0.0849      0.93  |  Q      |  V       |          |          |
16+10       0.1075      3.28  |         |  Q  V    |          |          |
16+15       0.1578      7.30  |         |          |   V    Q |          |
```

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16+20       0.1802      3.26  |          |  Q       |        V |          |
16+25       0.1927      1.81  |       Q  |          |          V          |
16+30       0.2012      1.23  |    Q     |          |          |V         |
16+35       0.2074      0.90  |   Q      |          |          | V        |
16+40       0.2118      0.64  |  Q       |          |          |  V       |
16+45       0.2149      0.45  | Q        |          |          |  V       |
16+50       0.2168      0.27  |Q         |          |          |   V      |
16+55       0.2183      0.22  Q          |          |          |   V      |
17+ 0       0.2196      0.19  Q          |          |          |   V      |
17+ 5       0.2209      0.18  Q          |          |          |   V      |
17+10       0.2220      0.17  Q          |          |          |    V     |
17+15       0.2230      0.14  Q          |          |          |    V     |
17+20       0.2238      0.12  Q          |          |          |    V     |
17+25       0.2245      0.11  Q          |          |          |    V     |
17+30       0.2253      0.10  Q          |          |          |    V     |
17+35       0.2259      0.10  Q          |          |          |    V     |
17+40       0.2266      0.10  Q          |          |          |    V     |
17+45       0.2273      0.10  Q          |          |          |    V     |
17+50       0.2279      0.09  Q          |          |          |    V     |
17+55       0.2286      0.09  Q          |          |          |     V    |
18+ 0       0.2292      0.09  Q          |          |          |     V    |
18+ 5       0.2298      0.09  Q          |          |          |     V    |
18+10       0.2304      0.08  Q          |          |          |     V    |
18+15       0.2309      0.08  Q          |          |          |     V    |
18+20       0.2314      0.07  Q          |          |          |     V    |
18+25       0.2319      0.07  Q          |          |          |     V    |
18+30       0.2323      0.07  Q          |          |          |     V    |
18+35       0.2328      0.06  Q          |          |          |     V    |
18+40       0.2332      0.06  Q          |          |          |     V    |
18+45       0.2336      0.06  Q          |          |          |     V    |
18+50       0.2340      0.06  Q          |          |          |     V    |
18+55       0.2345      0.06  Q          |          |          |      V   |
19+ 0       0.2349      0.06  Q          |          |          |      V   |
19+ 5       0.2353      0.06  Q          |          |          |      V   |
19+10       0.2356      0.06  Q          |          |          |      V   |
19+15       0.2360      0.06  Q          |          |          |      V   |
19+20       0.2364      0.05  Q          |          |          |      V   |
19+25       0.2368      0.05  Q          |          |          |      V   |
19+30       0.2371      0.05  Q          |          |          |      V   |
19+35       0.2375      0.05  Q          |          |          |      V   |
19+40       0.2379      0.05  Q          |          |          |      V   |
19+45       0.2382      0.05  Q          |          |          |      V   |
19+50       0.2386      0.05  Q          |          |          |      V   |
19+55       0.2389      0.05  Q          |          |          |      V   |
20+ 0       0.2393      0.05  Q          |          |          |      V   |
20+ 5       0.2396      0.05  Q          |          |          |      V   |
20+10       0.2399      0.05  Q          |          |          |      V   |
20+15       0.2403      0.05  Q          |          |          |      V   |
20+20       0.2406      0.05  Q          |          |          |      V   |
20+25       0.2409      0.05  Q          |          |          |       V  |
20+30       0.2412      0.05  Q          |          |          |       V  |
20+35       0.2416      0.05  Q          |          |          |       V  |
20+40       0.2419      0.05  Q          |          |          |       V  |
20+45       0.2422      0.05  Q          |          |          |       V  |
20+50       0.2425      0.04  Q          |          |          |       V  |
20+55       0.2428      0.04  Q          |          |          |       V  |
21+ 0       0.2431      0.04  Q          |          |          |       V  |
21+ 5       0.2434      0.04  Q          |          |          |       V  |
21+10       0.2437      0.04  Q          |          |          |       V  |
21+15       0.2440      0.04  Q          |          |          |       V  |
21+20       0.2443      0.04  Q          |          |          |       V  |
21+25       0.2446      0.04  Q          |          |          |       V  |
21+30       0.2449      0.04  Q          |          |          |       V  |
21+35       0.2452      0.04  Q          |          |          |       V  |
21+40       0.2454      0.04  Q          |          |          |       V  |
21+45       0.2457      0.04  Q          |          |          |       V  |
21+50       0.2460      0.04  Q          |          |          |       V  |
21+55       0.2463      0.04  Q          |          |          |       V  |
22+ 0       0.2466      0.04  Q          |          |          |       V  |
22+ 5       0.2468      0.04  Q          |          |          |       V  |
22+10       0.2471      0.04  Q          |          |          |        V |
```

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  22+15      0.2474      0.04  Q         |         |         |         V|
  22+20      0.2476      0.04  Q         |         |         |         V|
  22+25      0.2479      0.04  Q         |         |         |         V|
  22+30      0.2482      0.04  Q         |         |         |         V|
  22+35      0.2484      0.04  Q         |         |         |         V|
  22+40      0.2487      0.04  Q         |         |         |         V|
  22+45      0.2490      0.04  Q         |         |         |         V|
  22+50      0.2492      0.04  Q         |         |         |         V|
  22+55      0.2495      0.04  Q         |         |         |         V|
  23+ 0      0.2497      0.04  Q         |         |         |         V|
  23+ 5      0.2500      0.04  Q         |         |         |         V|
  23+10      0.2502      0.04  Q         |         |         |         V|
  23+15      0.2505      0.04  Q         |         |         |         V|
  23+20      0.2507      0.04  Q         |         |         |         V|
  23+25      0.2510      0.04  Q         |         |         |         V|
  23+30      0.2512      0.04  Q         |         |         |         V|
  23+35      0.2515      0.04  Q         |         |         |         V|
  23+40      0.2517      0.04  Q         |         |         |         V|
  23+45      0.2519      0.04  Q         |         |         |         V|
  23+50      0.2522      0.03  Q         |         |         |         V|
  23+55      0.2524      0.03  Q         |         |         |         V|
  24+ 0      0.2527      0.03  Q         |         |         |         V|
  24+ 5      0.2529      0.03  Q         |         |         |         V|
  24+10      0.2531      0.03  Q         |         |         |         V|
  24+15      0.2532      0.01  Q         |         |         |         V|
  24+20      0.2532      0.01  Q         |         |         |         V|
  24+25      0.2533      0.01  Q         |         |         |         V|
  24+30      0.2533      0.00  Q         |         |         |         V|
  24+35      0.2533      0.00  Q         |         |         |         V|
  24+40      0.2533      0.00  Q         |         |         |         V|
  24+45      0.2533      0.00  Q         |         |         |         V|
  24+50      0.2533      0.00  Q         |         |         |         V|
  24+55      0.2533      0.00  Q         |         |         |         V|
  25+ 0      0.2533      0.00  Q         |         |         |         V|
  25+ 5      0.2533      0.00  Q         |         |         |         V|
  25+10      0.2533      0.00  Q         |         |         |         V|
  25+15      0.2533      0.00  Q         |         |         |          V
-------------------------------------------------------------------------
```

Area ‘C’ – 5 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
5 YEAR 24 HOUR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.53            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.53            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.53           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             6.53            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.53            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.53           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      47.4          6.53      1.000     0.840    1.000    0.840

Area-averaged adjusted loss rate Fm (In/Hr) =  0.840

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
6.53	1.000	67.0	47.4	11.10	0.154

Area-averaged catchment yield fraction, Y = 0.154
Area-averaged low loss fraction, Yb = 0.846
User entry of time of concentration = 0.225 (hours)
++
Watershed area = 6.53(Ac.)
Catchment Lag time = 0.180 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 46.2963
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.840(In/Hr)
Average low loss rate fraction (Yb) = 0.846 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 6.53(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.403(In)
30-minute factor = 1.000 Adjusted rainfall = 0.690(In)
1-hour factor = 1.000 Adjusted rainfall = 0.849(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.586(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 78.97 (CFS))	
1	3.841	3.033
2	20.125	12.860
3	58.137	30.019
4	74.610	13.009
5	83.494	7.016
6	89.354	4.628
7	93.374	3.174
8	96.031	2.098
9	97.668	1.293
10	98.374	0.558
11	98.857	0.382
12	99.195	0.267
13	99.529	0.264
14	99.800	0.214
15	99.943	0.113
16	100.000	0.045

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4030	0.4030
2	0.4961	0.0931
3	0.5603	0.0642
4	0.6108	0.0505
5	0.6531	0.0423
6	0.6898	0.0367
7	0.7224	0.0326
8	0.7520	0.0295
9	0.7790	0.0270
10	0.8040	0.0250

11	0.8273	0.0233
12	0.8492	0.0219
13	0.8925	0.0433
14	0.9346	0.0421
15	0.9755	0.0409
16	1.0155	0.0399
17	1.0545	0.0390
18	1.0926	0.0381
19	1.1299	0.0373
20	1.1665	0.0366
21	1.2024	0.0359
22	1.2377	0.0353
23	1.2724	0.0347
24	1.3065	0.0341
25	1.3400	0.0336
26	1.3731	0.0331
27	1.4057	0.0326
28	1.4378	0.0321
29	1.4695	0.0317
30	1.5008	0.0313
31	1.5317	0.0309
32	1.5622	0.0305
33	1.5924	0.0302
34	1.6222	0.0298
35	1.6517	0.0295
36	1.6809	0.0292
37	1.7097	0.0289
38	1.7383	0.0286
39	1.7666	0.0283
40	1.7946	0.0280
41	1.8223	0.0277
42	1.8498	0.0275
43	1.8770	0.0272
44	1.9040	0.0270
45	1.9308	0.0268
46	1.9573	0.0265
47	1.9837	0.0263
48	2.0098	0.0261
49	2.0357	0.0259
50	2.0614	0.0257
51	2.0869	0.0255
52	2.1123	0.0253
53	2.1374	0.0251
54	2.1624	0.0250
55	2.1872	0.0248
56	2.2118	0.0246
57	2.2362	0.0245
58	2.2605	0.0243
59	2.2847	0.0241
60	2.3086	0.0240
61	2.3325	0.0238
62	2.3561	0.0237
63	2.3797	0.0235
64	2.4031	0.0234
65	2.4263	0.0233
66	2.4495	0.0231
67	2.4724	0.0230
68	2.4953	0.0229
69	2.5180	0.0227
70	2.5407	0.0226
71	2.5631	0.0225
72	2.5855	0.0224
73	2.6067	0.0212
74	2.6278	0.0211
75	2.6487	0.0210
76	2.6696	0.0208
77	2.6903	0.0207
78	2.7110	0.0206
79	2.7315	0.0205
80	2.7519	0.0204
81	2.7722	0.0203

82	2.7924	0.0202
83	2.8125	0.0201
84	2.8325	0.0200
85	2.8524	0.0199
86	2.8722	0.0198
87	2.8920	0.0197
88	2.9116	0.0196
89	2.9311	0.0195
90	2.9506	0.0194
91	2.9699	0.0194
92	2.9892	0.0193
93	3.0084	0.0192
94	3.0275	0.0191
95	3.0465	0.0190
96	3.0655	0.0189
97	3.0843	0.0189
98	3.1031	0.0188
99	3.1218	0.0187
100	3.1405	0.0186
101	3.1590	0.0186
102	3.1775	0.0185
103	3.1959	0.0184
104	3.2142	0.0183
105	3.2325	0.0183
106	3.2507	0.0182
107	3.2688	0.0181
108	3.2868	0.0180
109	3.3048	0.0180
110	3.3227	0.0179
111	3.3406	0.0178
112	3.3584	0.0178
113	3.3761	0.0177
114	3.3937	0.0177
115	3.4113	0.0176
116	3.4288	0.0175
117	3.4463	0.0175
118	3.4637	0.0174
119	3.4811	0.0173
120	3.4983	0.0173
121	3.5156	0.0172
122	3.5327	0.0172
123	3.5498	0.0171
124	3.5669	0.0171
125	3.5839	0.0170
126	3.6008	0.0169
127	3.6177	0.0169
128	3.6346	0.0168
129	3.6513	0.0168
130	3.6681	0.0167
131	3.6847	0.0167
132	3.7014	0.0166
133	3.7179	0.0166
134	3.7345	0.0165
135	3.7509	0.0165
136	3.7674	0.0164
137	3.7837	0.0164
138	3.8001	0.0163
139	3.8163	0.0163
140	3.8326	0.0162
141	3.8487	0.0162
142	3.8649	0.0161
143	3.8810	0.0161
144	3.8970	0.0160
145	3.9130	0.0160
146	3.9289	0.0160
147	3.9449	0.0159
148	3.9607	0.0159
149	3.9765	0.0158
150	3.9923	0.0158
151	4.0080	0.0157
152	4.0237	0.0157

153	4.0394	0.0156
154	4.0550	0.0156
155	4.0706	0.0156
156	4.0861	0.0155
157	4.1016	0.0155
158	4.1170	0.0154
159	4.1324	0.0154
160	4.1478	0.0154
161	4.1631	0.0153
162	4.1784	0.0153
163	4.1936	0.0152
164	4.2088	0.0152
165	4.2240	0.0152
166	4.2391	0.0151
167	4.2542	0.0151
168	4.2693	0.0151
169	4.2843	0.0150
170	4.2993	0.0150
171	4.3143	0.0150
172	4.3292	0.0149
173	4.3441	0.0149
174	4.3589	0.0148
175	4.3737	0.0148
176	4.3885	0.0148
177	4.4032	0.0147
178	4.4180	0.0147
179	4.4326	0.0147
180	4.4473	0.0146
181	4.4619	0.0146
182	4.4764	0.0146
183	4.4910	0.0145
184	4.5055	0.0145
185	4.5200	0.0145
186	4.5344	0.0144
187	4.5488	0.0144
188	4.5632	0.0144
189	4.5776	0.0144
190	4.5919	0.0143
191	4.6062	0.0143
192	4.6204	0.0143
193	4.6347	0.0142
194	4.6489	0.0142
195	4.6630	0.0142
196	4.6772	0.0141
197	4.6913	0.0141
198	4.7054	0.0141
199	4.7194	0.0141
200	4.7334	0.0140
201	4.7474	0.0140
202	4.7614	0.0140
203	4.7753	0.0139
204	4.7893	0.0139
205	4.8031	0.0139
206	4.8170	0.0139
207	4.8308	0.0138
208	4.8446	0.0138
209	4.8584	0.0138
210	4.8721	0.0137
211	4.8859	0.0137
212	4.8996	0.0137
213	4.9132	0.0137
214	4.9269	0.0136
215	4.9405	0.0136
216	4.9541	0.0136
217	4.9676	0.0136
218	4.9812	0.0135
219	4.9947	0.0135
220	5.0082	0.0135
221	5.0216	0.0135
222	5.0351	0.0134
223	5.0485	0.0134

224	5.0619	0.0134
225	5.0752	0.0134
226	5.0886	0.0133
227	5.1019	0.0133
228	5.1152	0.0133
229	5.1284	0.0133
230	5.1417	0.0132
231	5.1549	0.0132
232	5.1681	0.0132
233	5.1813	0.0132
234	5.1944	0.0132
235	5.2076	0.0131
236	5.2207	0.0131
237	5.2337	0.0131
238	5.2468	0.0131
239	5.2598	0.0130
240	5.2729	0.0130
241	5.2859	0.0130
242	5.2988	0.0130
243	5.3118	0.0129
244	5.3247	0.0129
245	5.3376	0.0129
246	5.3505	0.0129
247	5.3634	0.0129
248	5.3762	0.0128
249	5.3890	0.0128
250	5.4018	0.0128
251	5.4146	0.0128
252	5.4274	0.0128
253	5.4401	0.0127
254	5.4528	0.0127
255	5.4655	0.0127
256	5.4782	0.0127
257	5.4908	0.0127
258	5.5035	0.0126
259	5.5161	0.0126
260	5.5287	0.0126
261	5.5413	0.0126
262	5.5538	0.0126
263	5.5664	0.0125
264	5.5789	0.0125
265	5.5914	0.0125
266	5.6039	0.0125
267	5.6163	0.0125
268	5.6288	0.0124
269	5.6412	0.0124
270	5.6536	0.0124
271	5.6660	0.0124
272	5.6783	0.0124
273	5.6907	0.0123
274	5.7030	0.0123
275	5.7153	0.0123
276	5.7276	0.0123
277	5.7399	0.0123
278	5.7522	0.0123
279	5.7644	0.0122
280	5.7766	0.0122
281	5.7888	0.0122
282	5.8010	0.0122
283	5.8132	0.0122
284	5.8253	0.0121
285	5.8375	0.0121
286	5.8496	0.0121
287	5.8617	0.0121
288	5.8737	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0102	0.0019

2	0.0121	0.0102	0.0019
3	0.0121	0.0103	0.0019
4	0.0121	0.0103	0.0019
5	0.0122	0.0103	0.0019
6	0.0122	0.0103	0.0019
7	0.0122	0.0104	0.0019
8	0.0123	0.0104	0.0019
9	0.0123	0.0104	0.0019
10	0.0123	0.0104	0.0019
11	0.0123	0.0104	0.0019
12	0.0124	0.0105	0.0019
13	0.0124	0.0105	0.0019
14	0.0124	0.0105	0.0019
15	0.0125	0.0105	0.0019
16	0.0125	0.0106	0.0019
17	0.0125	0.0106	0.0019
18	0.0125	0.0106	0.0019
19	0.0126	0.0106	0.0019
20	0.0126	0.0107	0.0019
21	0.0126	0.0107	0.0019
22	0.0127	0.0107	0.0020
23	0.0127	0.0107	0.0020
24	0.0127	0.0108	0.0020
25	0.0128	0.0108	0.0020
26	0.0128	0.0108	0.0020
27	0.0128	0.0108	0.0020
28	0.0128	0.0109	0.0020
29	0.0129	0.0109	0.0020
30	0.0129	0.0109	0.0020
31	0.0129	0.0110	0.0020
32	0.0130	0.0110	0.0020
33	0.0130	0.0110	0.0020
34	0.0130	0.0110	0.0020
35	0.0131	0.0111	0.0020
36	0.0131	0.0111	0.0020
37	0.0132	0.0111	0.0020
38	0.0132	0.0111	0.0020
39	0.0132	0.0112	0.0020
40	0.0132	0.0112	0.0020
41	0.0133	0.0112	0.0020
42	0.0133	0.0113	0.0021
43	0.0134	0.0113	0.0021
44	0.0134	0.0113	0.0021
45	0.0134	0.0114	0.0021
46	0.0135	0.0114	0.0021
47	0.0135	0.0114	0.0021
48	0.0135	0.0115	0.0021
49	0.0136	0.0115	0.0021
50	0.0136	0.0115	0.0021
51	0.0137	0.0116	0.0021
52	0.0137	0.0116	0.0021
53	0.0137	0.0116	0.0021
54	0.0138	0.0117	0.0021
55	0.0138	0.0117	0.0021
56	0.0139	0.0117	0.0021
57	0.0139	0.0118	0.0021
58	0.0139	0.0118	0.0021
59	0.0140	0.0118	0.0022
60	0.0140	0.0119	0.0022
61	0.0141	0.0119	0.0022
62	0.0141	0.0119	0.0022
63	0.0142	0.0120	0.0022
64	0.0142	0.0120	0.0022
65	0.0143	0.0121	0.0022
66	0.0143	0.0121	0.0022
67	0.0144	0.0121	0.0022
68	0.0144	0.0122	0.0022
69	0.0144	0.0122	0.0022
70	0.0145	0.0122	0.0022
71	0.0145	0.0123	0.0022
72	0.0146	0.0123	0.0022

73	0.0146	0.0124	0.0023
74	0.0147	0.0124	0.0023
75	0.0147	0.0125	0.0023
76	0.0148	0.0125	0.0023
77	0.0148	0.0126	0.0023
78	0.0149	0.0126	0.0023
79	0.0150	0.0126	0.0023
80	0.0150	0.0127	0.0023
81	0.0151	0.0127	0.0023
82	0.0151	0.0128	0.0023
83	0.0152	0.0128	0.0023
84	0.0152	0.0129	0.0023
85	0.0153	0.0129	0.0024
86	0.0153	0.0130	0.0024
87	0.0154	0.0130	0.0024
88	0.0154	0.0131	0.0024
89	0.0155	0.0131	0.0024
90	0.0156	0.0132	0.0024
91	0.0156	0.0132	0.0024
92	0.0157	0.0133	0.0024
93	0.0158	0.0133	0.0024
94	0.0158	0.0134	0.0024
95	0.0159	0.0135	0.0025
96	0.0160	0.0135	0.0025
97	0.0160	0.0136	0.0025
98	0.0161	0.0136	0.0025
99	0.0162	0.0137	0.0025
100	0.0162	0.0137	0.0025
101	0.0163	0.0138	0.0025
102	0.0164	0.0138	0.0025
103	0.0165	0.0139	0.0025
104	0.0165	0.0140	0.0025
105	0.0166	0.0141	0.0026
106	0.0167	0.0141	0.0026
107	0.0168	0.0142	0.0026
108	0.0168	0.0142	0.0026
109	0.0169	0.0143	0.0026
110	0.0170	0.0144	0.0026
111	0.0171	0.0145	0.0026
112	0.0172	0.0145	0.0026
113	0.0173	0.0146	0.0027
114	0.0173	0.0147	0.0027
115	0.0175	0.0148	0.0027
116	0.0175	0.0148	0.0027
117	0.0177	0.0149	0.0027
118	0.0177	0.0150	0.0027
119	0.0178	0.0151	0.0028
120	0.0179	0.0152	0.0028
121	0.0180	0.0153	0.0028
122	0.0181	0.0153	0.0028
123	0.0183	0.0154	0.0028
124	0.0183	0.0155	0.0028
125	0.0185	0.0156	0.0028
126	0.0186	0.0157	0.0029
127	0.0187	0.0158	0.0029
128	0.0188	0.0159	0.0029
129	0.0189	0.0160	0.0029
130	0.0190	0.0161	0.0029
131	0.0192	0.0162	0.0030
132	0.0193	0.0163	0.0030
133	0.0194	0.0165	0.0030
134	0.0195	0.0165	0.0030
135	0.0197	0.0167	0.0030
136	0.0198	0.0168	0.0031
137	0.0200	0.0169	0.0031
138	0.0201	0.0170	0.0031
139	0.0203	0.0172	0.0031
140	0.0204	0.0173	0.0031
141	0.0206	0.0174	0.0032
142	0.0207	0.0175	0.0032
143	0.0210	0.0177	0.0032

144	0.0211	0.0178	0.0032
145	0.0224	0.0189	0.0034
146	0.0225	0.0190	0.0035
147	0.0227	0.0192	0.0035
148	0.0229	0.0193	0.0035
149	0.0231	0.0196	0.0036
150	0.0233	0.0197	0.0036
151	0.0235	0.0199	0.0036
152	0.0237	0.0200	0.0036
153	0.0240	0.0203	0.0037
154	0.0241	0.0204	0.0037
155	0.0245	0.0207	0.0038
156	0.0246	0.0208	0.0038
157	0.0250	0.0211	0.0038
158	0.0251	0.0213	0.0039
159	0.0255	0.0216	0.0039
160	0.0257	0.0217	0.0040
161	0.0261	0.0221	0.0040
162	0.0263	0.0223	0.0041
163	0.0268	0.0226	0.0041
164	0.0270	0.0228	0.0042
165	0.0275	0.0232	0.0042
166	0.0277	0.0235	0.0043
167	0.0283	0.0239	0.0044
168	0.0286	0.0242	0.0044
169	0.0292	0.0247	0.0045
170	0.0295	0.0249	0.0045
171	0.0302	0.0255	0.0046
172	0.0305	0.0258	0.0047
173	0.0313	0.0265	0.0048
174	0.0317	0.0268	0.0049
175	0.0326	0.0276	0.0050
176	0.0331	0.0280	0.0051
177	0.0341	0.0288	0.0053
178	0.0347	0.0293	0.0053
179	0.0359	0.0304	0.0055
180	0.0366	0.0310	0.0056
181	0.0381	0.0323	0.0059
182	0.0390	0.0330	0.0060
183	0.0409	0.0346	0.0063
184	0.0421	0.0356	0.0065
185	0.0219	0.0185	0.0034
186	0.0233	0.0197	0.0036
187	0.0270	0.0229	0.0042
188	0.0295	0.0250	0.0046
189	0.0367	0.0311	0.0057
190	0.0423	0.0358	0.0065
191	0.0642	0.0543	0.0099
192	0.0931	0.0700	0.0232
193	0.4030	0.0700	0.3330
194	0.0505	0.0427	0.0078
195	0.0326	0.0276	0.0050
196	0.0250	0.0212	0.0039
197	0.0433	0.0366	0.0067
198	0.0399	0.0338	0.0062
199	0.0373	0.0316	0.0058
200	0.0353	0.0298	0.0054
201	0.0336	0.0284	0.0052
202	0.0321	0.0272	0.0050
203	0.0309	0.0261	0.0048
204	0.0298	0.0252	0.0046
205	0.0289	0.0244	0.0044
206	0.0280	0.0237	0.0043
207	0.0272	0.0230	0.0042
208	0.0265	0.0225	0.0041
209	0.0259	0.0219	0.0040
210	0.0253	0.0214	0.0039
211	0.0248	0.0210	0.0038
212	0.0243	0.0205	0.0037
213	0.0238	0.0202	0.0037
214	0.0234	0.0198	0.0036

215	0.0230	0.0194	0.0035
216	0.0226	0.0191	0.0035
217	0.0212	0.0179	0.0033
218	0.0208	0.0176	0.0032
219	0.0205	0.0174	0.0032
220	0.0202	0.0171	0.0031
221	0.0199	0.0168	0.0031
222	0.0196	0.0166	0.0030
223	0.0194	0.0164	0.0030
224	0.0191	0.0162	0.0029
225	0.0189	0.0160	0.0029
226	0.0186	0.0158	0.0029
227	0.0184	0.0156	0.0028
228	0.0182	0.0154	0.0028
229	0.0180	0.0152	0.0028
230	0.0178	0.0150	0.0027
231	0.0176	0.0149	0.0027
232	0.0174	0.0147	0.0027
233	0.0172	0.0146	0.0027
234	0.0171	0.0144	0.0026
235	0.0169	0.0143	0.0026
236	0.0167	0.0141	0.0026
237	0.0166	0.0140	0.0026
238	0.0164	0.0139	0.0025
239	0.0163	0.0138	0.0025
240	0.0161	0.0136	0.0025
241	0.0160	0.0135	0.0025
242	0.0159	0.0134	0.0024
243	0.0157	0.0133	0.0024
244	0.0156	0.0132	0.0024
245	0.0155	0.0131	0.0024
246	0.0154	0.0130	0.0024
247	0.0152	0.0129	0.0024
248	0.0151	0.0128	0.0023
249	0.0150	0.0127	0.0023
250	0.0149	0.0126	0.0023
251	0.0148	0.0125	0.0023
252	0.0147	0.0124	0.0023
253	0.0146	0.0124	0.0023
254	0.0145	0.0123	0.0022
255	0.0144	0.0122	0.0022
256	0.0143	0.0121	0.0022
257	0.0142	0.0120	0.0022
258	0.0141	0.0120	0.0022
259	0.0141	0.0119	0.0022
260	0.0140	0.0118	0.0022
261	0.0139	0.0117	0.0021
262	0.0138	0.0117	0.0021
263	0.0137	0.0116	0.0021
264	0.0136	0.0115	0.0021
265	0.0136	0.0115	0.0021
266	0.0135	0.0114	0.0021
267	0.0134	0.0113	0.0021
268	0.0133	0.0113	0.0021
269	0.0133	0.0112	0.0020
270	0.0132	0.0112	0.0020
271	0.0131	0.0111	0.0020
272	0.0131	0.0110	0.0020
273	0.0130	0.0110	0.0020
274	0.0129	0.0109	0.0020
275	0.0129	0.0109	0.0020
276	0.0128	0.0108	0.0020
277	0.0127	0.0108	0.0020
278	0.0127	0.0107	0.0020
279	0.0126	0.0107	0.0019
280	0.0126	0.0106	0.0019
281	0.0125	0.0106	0.0019
282	0.0124	0.0105	0.0019
283	0.0124	0.0105	0.0019
284	0.0123	0.0104	0.0019
285	0.0123	0.0104	0.0019

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      286              0.0122           0.0103              0.0019
      287              0.0122           0.0103              0.0019
      288              0.0121           0.0102              0.0019
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      4.69(In)
      Total effective rainfall =      1.18(In)
      Peak flow rate in flood hydrograph =     10.55(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0000      0.01  Q          |          |          |          |
  0+10       0.0002      0.03  Q          |          |          |          |
  0+15       0.0008      0.09  Q          |          |          |          |
  0+20       0.0016      0.11  Q          |          |          |          |
  0+25       0.0024      0.12  Q          |          |          |          |
  0+30       0.0033      0.13  Q          |          |          |          |
  0+35       0.0043      0.14  Q          |          |          |          |
  0+40       0.0053      0.14  Q          |          |          |          |
  0+45       0.0063      0.15  Q          |          |          |          |
  0+50       0.0073      0.15  Q          |          |          |          |
  0+55       0.0083      0.15  Q          |          |          |          |
  1+ 0       0.0093      0.15  Q          |          |          |          |
  1+ 5       0.0104      0.15  Q          |          |          |          |
  1+10       0.0114      0.15  Q          |          |          |          |
  1+15       0.0124      0.15  Q          |          |          |          |
  1+20       0.0135      0.15  Q          |          |          |          |
  1+25       0.0145      0.15  Q          |          |          |          |
  1+30       0.0156      0.15  Q          |          |          |          |
  1+35       0.0166      0.15  QV         |          |          |          |
  1+40       0.0176      0.15  QV         |          |          |          |
  1+45       0.0187      0.15  QV         |          |          |          |
  1+50       0.0198      0.15  QV         |          |          |          |
  1+55       0.0208      0.15  QV         |          |          |          |
  2+ 0       0.0219      0.15  QV         |          |          |          |
  2+ 5       0.0229      0.15  QV         |          |          |          |
  2+10       0.0240      0.15  QV         |          |          |          |
  2+15       0.0251      0.15  QV         |          |          |          |
  2+20       0.0261      0.16  QV         |          |          |          |
  2+25       0.0272      0.16  QV         |          |          |          |
  2+30       0.0283      0.16  QV         |          |          |          |
  2+35       0.0294      0.16  QV         |          |          |          |
  2+40       0.0304      0.16  QV         |          |          |          |
  2+45       0.0315      0.16  QV         |          |          |          |
  2+50       0.0326      0.16  Q V        |          |          |          |
  2+55       0.0337      0.16  Q V        |          |          |          |
  3+ 0       0.0348      0.16  Q V        |          |          |          |
  3+ 5       0.0359      0.16  Q V        |          |          |          |
  3+10       0.0370      0.16  Q V        |          |          |          |
  3+15       0.0381      0.16  Q V        |          |          |          |
  3+20       0.0392      0.16  Q V        |          |          |          |
  3+25       0.0403      0.16  Q V        |          |          |          |
  3+30       0.0414      0.16  Q V        |          |          |          |
  3+35       0.0425      0.16  Q V        |          |          |          |
  3+40       0.0436      0.16  Q V        |          |          |          |
  3+45       0.0447      0.16  Q V        |          |          |          |
  3+50       0.0459      0.16  Q V        |          |          |          |
  3+55       0.0470      0.16  Q V        |          |          |          |
  4+ 0       0.0481      0.16  Q V        |          |          |          |
  4+ 5       0.0492      0.16  Q  V       |          |          |          |
  4+10       0.0504      0.16  Q  V       |          |          |          |
  4+15       0.0515      0.16  Q  V       |          |          |          |
  4+20       0.0526      0.17  Q  V       |          |          |          |
  4+25       0.0538      0.17  Q  V       |          |          |          |
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 4+30      0.0549      0.17  Q  V      |          |          |          |
 4+35      0.0561      0.17  Q  V      |          |          |          |
 4+40      0.0572      0.17  Q  V      |          |          |          |
 4+45      0.0584      0.17  Q  V      |          |          |          |
 4+50      0.0595      0.17  Q  V      |          |          |          |
 4+55      0.0607      0.17  Q  V      |          |          |          |
 5+ 0      0.0619      0.17  Q  V      |          |          |          |
 5+ 5      0.0630      0.17  Q  V      |          |          |          |
 5+10      0.0642      0.17  Q  V      |          |          |          |
 5+15      0.0654      0.17  Q   V     |          |          |          |
 5+20      0.0666      0.17  Q   V     |          |          |          |
 5+25      0.0678      0.17  Q   V     |          |          |          |
 5+30      0.0689      0.17  Q   V     |          |          |          |
 5+35      0.0701      0.17  Q   V     |          |          |          |
 5+40      0.0713      0.17  Q   V     |          |          |          |
 5+45      0.0725      0.17  Q   V     |          |          |          |
 5+50      0.0737      0.17  Q   V     |          |          |          |
 5+55      0.0749      0.18  Q   V     |          |          |          |
 6+ 0      0.0762      0.18  Q   V     |          |          |          |
 6+ 5      0.0774      0.18  Q   V     |          |          |          |
 6+10      0.0786      0.18  Q   V     |          |          |          |
 6+15      0.0798      0.18  Q   V     |          |          |          |
 6+20      0.0810      0.18  Q    V    |          |          |          |
 6+25      0.0823      0.18  Q    V    |          |          |          |
 6+30      0.0835      0.18  Q    V    |          |          |          |
 6+35      0.0847      0.18  Q    V    |          |          |          |
 6+40      0.0860      0.18  Q    V    |          |          |          |
 6+45      0.0872      0.18  Q    V    |          |          |          |
 6+50      0.0885      0.18  Q    V    |          |          |          |
 6+55      0.0897      0.18  Q    V    |          |          |          |
 7+ 0      0.0910      0.18  Q    V    |          |          |          |
 7+ 5      0.0923      0.18  Q    V    |          |          |          |
 7+10      0.0935      0.18  Q    V    |          |          |          |
 7+15      0.0948      0.19  Q    V    |          |          |          |
 7+20      0.0961      0.19  Q    V    |          |          |          |
 7+25      0.0974      0.19  Q     V   |          |          |          |
 7+30      0.0987      0.19  Q     V   |          |          |          |
 7+35      0.1000      0.19  Q     V   |          |          |          |
 7+40      0.1013      0.19  Q     V   |          |          |          |
 7+45      0.1026      0.19  Q     V   |          |          |          |
 7+50      0.1039      0.19  Q     V   |          |          |          |
 7+55      0.1052      0.19  Q     V   |          |          |          |
 8+ 0      0.1065      0.19  Q     V   |          |          |          |
 8+ 5      0.1079      0.19  Q     V   |          |          |          |
 8+10      0.1092      0.19  Q     V   |          |          |          |
 8+15      0.1105      0.19  Q     V   |          |          |          |
 8+20      0.1119      0.20  Q     V   |          |          |          |
 8+25      0.1132      0.20  Q      V  |          |          |          |
 8+30      0.1146      0.20  Q      V  |          |          |          |
 8+35      0.1160      0.20  Q      V  |          |          |          |
 8+40      0.1173      0.20  Q      V  |          |          |          |
 8+45      0.1187      0.20  Q      V  |          |          |          |
 8+50      0.1201      0.20  Q      V  |          |          |          |
 8+55      0.1215      0.20  Q      V  |          |          |          |
 9+ 0      0.1229      0.20  Q      V  |          |          |          |
 9+ 5      0.1243      0.20  Q      V  |          |          |          |
 9+10      0.1257      0.20  Q      V  |          |          |          |
 9+15      0.1271      0.21  Q      V  |          |          |          |
 9+20      0.1285      0.21  Q      V  |          |          |          |
 9+25      0.1299      0.21  Q       V |          |          |          |
 9+30      0.1314      0.21  Q       V |          |          |          |
 9+35      0.1328      0.21  Q       V |          |          |          |
 9+40      0.1342      0.21  Q       V |          |          |          |
 9+45      0.1357      0.21  Q       V |          |          |          |
 9+50      0.1372      0.21  Q       V |          |          |          |
 9+55      0.1386      0.21  Q       V |          |          |          |
10+ 0      0.1401      0.21  Q       V |          |          |          |
10+ 5      0.1416      0.22  Q       V |          |          |          |
10+10      0.1431      0.22  Q       V |          |          |          |
10+15      0.1446      0.22  Q       V |          |          |          |
10+20      0.1461      0.22  Q        V|          |          |          |
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10+25       0.1476      0.22  Q        V|         |         |         |
10+30       0.1492      0.22  Q        V|         |         |         |
10+35       0.1507      0.22  Q        V|         |         |         |
10+40       0.1523      0.22  Q        V|         |         |         |
10+45       0.1538      0.23  Q        V|         |         |         |
10+50       0.1554      0.23  Q        V|         |         |         |
10+55       0.1570      0.23  Q        V|         |         |         |
11+ 0       0.1586      0.23  Q        V|         |         |         |
11+ 5       0.1602      0.23  Q        V|         |         |         |
11+10       0.1618      0.23  Q         V         |         |         |
11+15       0.1634      0.24  Q         V         |         |         |
11+20       0.1650      0.24  Q         V         |         |         |
11+25       0.1667      0.24  Q         V         |         |         |
11+30       0.1683      0.24  Q         V         |         |         |
11+35       0.1700      0.24  Q         V         |         |         |
11+40       0.1716      0.24  Q         V         |         |         |
11+45       0.1733      0.25  Q         V         |         |         |
11+50       0.1750      0.25  Q         V         |         |         |
11+55       0.1768      0.25  Q         V         |         |         |
12+ 0       0.1785      0.25  Q         |V        |         |         |
12+ 5       0.1802      0.25  Q         |V        |         |         |
12+10       0.1820      0.26  Q         |V        |         |         |
12+15       0.1838      0.26  Q         |V        |         |         |
12+20       0.1857      0.27  Q         |V        |         |         |
12+25       0.1876      0.27  Q         |V        |         |         |
12+30       0.1895      0.28  Q         |V        |         |         |
12+35       0.1914      0.28  Q         |V        |         |         |
12+40       0.1933      0.28  Q         |V        |         |         |
12+45       0.1953      0.28  Q         | V       |         |         |
12+50       0.1972      0.29  Q         | V       |         |         |
12+55       0.1992      0.29  Q         | V       |         |         |
13+ 0       0.2012      0.29  Q         | V       |         |         |
13+ 5       0.2033      0.29  Q         | V       |         |         |
13+10       0.2053      0.30  Q         | V       |         |         |
13+15       0.2074      0.30  Q         | V       |         |         |
13+20       0.2095      0.30  Q         |  V      |         |         |
13+25       0.2116      0.31  Q         |  V      |         |         |
13+30       0.2137      0.31  Q         |  V      |         |         |
13+35       0.2159      0.31  Q         |  V      |         |         |
13+40       0.2181      0.32  Q         |  V      |         |         |
13+45       0.2203      0.32  Q         |  V      |         |         |
13+50       0.2226      0.33  Q         |  V      |         |         |
13+55       0.2248      0.33  Q         |  V      |         |         |
14+ 0       0.2271      0.33  Q         |   V     |         |         |
14+ 5       0.2295      0.34  Q         |   V     |         |         |
14+10       0.2318      0.34  Q         |   V     |         |         |
14+15       0.2343      0.35  Q         |   V     |         |         |
14+20       0.2367      0.36  Q         |   V     |         |         |
14+25       0.2392      0.36  Q         |   V     |         |         |
14+30       0.2417      0.37  Q         |    V    |         |         |
14+35       0.2443      0.37  Q         |    V    |         |         |
14+40       0.2469      0.38  Q         |    V    |         |         |
14+45       0.2496      0.39  Q         |    V    |         |         |
14+50       0.2523      0.40  Q         |    V    |         |         |
14+55       0.2551      0.41  Q         |    V    |         |         |
15+ 0       0.2580      0.42  Q         |     V   |         |         |
15+ 5       0.2610      0.43  Q         |     V   |         |         |
15+10       0.2640      0.44  Q         |     V   |         |         |
15+15       0.2671      0.45  Q         |     V   |         |         |
15+20       0.2703      0.47  Q         |     V   |         |         |
15+25       0.2736      0.47  Q         |     V   |         |         |
15+30       0.2766      0.45  Q         |      V  |         |         |
15+35       0.2791      0.36  Q         |      V  |         |         |
15+40       0.2815      0.34  Q         |      V  |         |         |
15+45       0.2839      0.35  Q         |      V  |         |         |
15+50       0.2865      0.38  Q         |      V  |         |         |
15+55       0.2895      0.43  Q         |      V  |         |         |
16+ 0       0.2933      0.56  |Q        |       V |         |         |
16+ 5       0.3056      1.79  |  Q      |       V |         |         |
16+10       0.3417      5.24  |         Q         |V        |         |
16+15       0.4144     10.55  |         |         |Q   V    |         |
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16+20       0.4481      4.90  |         Q|          |       V  |          |
16+25       0.4676      2.83  |     Q    |          |          V|          |
16+30       0.4813      1.99  |   Q      |          |          V|          |
16+35       0.4919      1.55  |   Q      |          |           V          |
16+40       0.5000      1.18  |  Q       |          |           |V         |
16+45       0.5062      0.89  |Q         |          |           |V         |
16+50       0.5105      0.63  |Q         |          |           |V         |
16+55       0.5143      0.55  |Q         |          |           |V         |
17+ 0       0.5177      0.50  Q          |          |           | V        |
17+ 5       0.5210      0.48  Q          |          |           | V        |
17+10       0.5241      0.45  Q          |          |           | V        |
17+15       0.5269      0.40  Q          |          |           | V        |
17+20       0.5294      0.37  Q          |          |           | V        |
17+25       0.5318      0.34  Q          |          |           |  V       |
17+30       0.5341      0.33  Q          |          |           |  V       |
17+35       0.5363      0.32  Q          |          |           |  V       |
17+40       0.5385      0.32  Q          |          |           |  V       |
17+45       0.5406      0.31  Q          |          |           |  V       |
17+50       0.5427      0.30  Q          |          |           |  V       |
17+55       0.5447      0.30  Q          |          |           |  V       |
18+ 0       0.5467      0.29  Q          |          |           |  V       |
18+ 5       0.5487      0.28  Q          |          |           |   V      |
18+10       0.5506      0.28  Q          |          |           |   V      |
18+15       0.5524      0.27  Q          |          |           |   V      |
18+20       0.5542      0.26  Q          |          |           |   V      |
18+25       0.5560      0.26  Q          |          |           |   V      |
18+30       0.5577      0.25  Q          |          |           |   V      |
18+35       0.5594      0.25  Q          |          |           |   V      |
18+40       0.5611      0.24  Q          |          |           |   V      |
18+45       0.5627      0.24  Q          |          |           |   V      |
18+50       0.5644      0.24  Q          |          |           |    V     |
18+55       0.5660      0.23  Q          |          |           |    V     |
19+ 0       0.5676      0.23  Q          |          |           |    V     |
19+ 5       0.5691      0.23  Q          |          |           |    V     |
19+10       0.5707      0.22  Q          |          |           |    V     |
19+15       0.5722      0.22  Q          |          |           |    V     |
19+20       0.5737      0.22  Q          |          |           |    V     |
19+25       0.5752      0.22  Q          |          |           |    V     |
19+30       0.5767      0.21  Q          |          |           |    V     |
19+35       0.5781      0.21  Q          |          |           |    V     |
19+40       0.5796      0.21  Q          |          |           |    V     |
19+45       0.5810      0.21  Q          |          |           |     V    |
19+50       0.5824      0.21  Q          |          |           |     V    |
19+55       0.5838      0.20  Q          |          |           |     V    |
20+ 0       0.5852      0.20  Q          |          |           |     V    |
20+ 5       0.5866      0.20  Q          |          |           |     V    |
20+10       0.5879      0.20  Q          |          |           |     V    |
20+15       0.5893      0.20  Q          |          |           |     V    |
20+20       0.5906      0.19  Q          |          |           |     V    |
20+25       0.5919      0.19  Q          |          |           |     V    |
20+30       0.5933      0.19  Q          |          |           |     V    |
20+35       0.5946      0.19  Q          |          |           |     V    |
20+40       0.5959      0.19  Q          |          |           |     V    |
20+45       0.5972      0.19  Q          |          |           |      V   |
20+50       0.5984      0.19  Q          |          |           |      V   |
20+55       0.5997      0.18  Q          |          |           |      V   |
21+ 0       0.6010      0.18  Q          |          |           |      V   |
21+ 5       0.6022      0.18  Q          |          |           |      V   |
21+10       0.6035      0.18  Q          |          |           |      V   |
21+15       0.6047      0.18  Q          |          |           |      V   |
21+20       0.6059      0.18  Q          |          |           |      V   |
21+25       0.6071      0.18  Q          |          |           |      V   |
21+30       0.6083      0.18  Q          |          |           |      V   |
21+35       0.6095      0.17  Q          |          |           |      V   |
21+40       0.6107      0.17  Q          |          |           |      V   |
21+45       0.6119      0.17  Q          |          |           |      V   |
21+50       0.6131      0.17  Q          |          |           |       V  |
21+55       0.6143      0.17  Q          |          |           |       V  |
22+ 0       0.6154      0.17  Q          |          |           |       V  |
22+ 5       0.6166      0.17  Q          |          |           |       V  |
22+10       0.6177      0.17  Q          |          |           |       V  |
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  22+15       0.6189      0.17  Q          |          |          |       V |
  22+20       0.6200      0.17  Q          |          |          |       V |
  22+25       0.6211      0.16  Q          |          |          |       V |
  22+30       0.6223      0.16  Q          |          |          |       V |
  22+35       0.6234      0.16  Q          |          |          |       V |
  22+40       0.6245      0.16  Q          |          |          |       V |
  22+45       0.6256      0.16  Q          |          |          |       V |
  22+50       0.6267      0.16  Q          |          |          |       V |
  22+55       0.6278      0.16  Q          |          |          |       V |
  23+ 0       0.6289      0.16  Q          |          |          |        V|
  23+ 5       0.6300      0.16  Q          |          |          |        V|
  23+10       0.6310      0.16  Q          |          |          |        V|
  23+15       0.6321      0.16  Q          |          |          |        V|
  23+20       0.6332      0.15  Q          |          |          |        V|
  23+25       0.6342      0.15  Q          |          |          |        V|
  23+30       0.6353      0.15  Q          |          |          |        V|
  23+35       0.6364      0.15  Q          |          |          |        V|
  23+40       0.6374      0.15  Q          |          |          |        V|
  23+45       0.6384      0.15  Q          |          |          |        V|
  23+50       0.6395      0.15  Q          |          |          |        V|
  23+55       0.6405      0.15  Q          |          |          |        V|
  24+ 0       0.6415      0.15  Q          |          |          |        V|
  24+ 5       0.6425      0.14  Q          |          |          |        V|
  24+10       0.6433      0.12  Q          |          |          |        V|
  24+15       0.6438      0.06  Q          |          |          |        V|
  24+20       0.6440      0.04  Q          |          |          |        V|
  24+25       0.6442      0.02  Q          |          |          |        V|
  24+30       0.6443      0.02  Q          |          |          |        V|
  24+35       0.6444      0.01  Q          |          |          |        V|
  24+40       0.6444      0.01  Q          |          |          |        V|
  24+45       0.6444      0.00  Q          |          |          |        V|
  24+50       0.6445      0.00  Q          |          |          |        V|
  24+55       0.6445      0.00  Q          |          |          |        V|
  25+ 0       0.6445      0.00  Q          |          |          |        V|
  25+ 5       0.6445      0.00  Q          |          |          |        V|
  25+10       0.6445      0.00  Q          |          |          |        V|
  25+15       0.6445      0.00  Q          |          |          |         V
-------------------------------------------------------------------------
```

Area ‘C’ – 10 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
10 YEAR 24 HOUR STORM
DECEMBER 17, 2024
----------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.53            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.53            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.53           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.53            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.53            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.53           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      67.0          6.53      1.000     0.578    1.000    0.578

Area-averaged adjusted loss rate Fm (In/Hr) =  0.578

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
6.53	1.000	67.0	67.0	4.93	0.486

Area-averaged catchment yield fraction, Y = 0.486
Area-averaged low loss fraction, Yb = 0.514
User entry of time of concentration = 0.225 (hours)
++
Watershed area = 6.53(Ac.)
Catchment Lag time = 0.180 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 46.2963
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.578(In/Hr)
Average low loss rate fraction (Yb) = 0.514 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 6.53(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.474(In)
30-minute factor = 1.000 Adjusted rainfall = 0.812(In)
1-hour factor = 1.000 Adjusted rainfall = 1.000(In)
3-hour factor = 1.000 Adjusted rainfall = 1.973(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 78.97 (CFS))	
1	3.841	3.033
2	20.125	12.860
3	58.137	30.019
4	74.610	13.009
5	83.494	7.016
6	89.354	4.628
7	93.374	3.174
8	96.031	2.098
9	97.668	1.293
10	98.374	0.558
11	98.857	0.382
12	99.195	0.267
13	99.529	0.264
14	99.800	0.214
15	99.943	0.113
16	100.000	0.045

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4744	0.4744
2	0.5840	0.1096
3	0.6596	0.0755
4	0.7190	0.0595
5	0.7688	0.0498
6	0.8120	0.0432
7	0.8504	0.0384
8	0.8852	0.0348
9	0.9170	0.0318
10	0.9465	0.0294

11	0.9739	0.0275
12	0.9997	0.0258
13	1.0504	0.0508
14	1.0997	0.0493
15	1.1477	0.0480
16	1.1944	0.0468
17	1.2401	0.0457
18	1.2847	0.0446
19	1.3284	0.0437
20	1.3713	0.0428
21	1.4133	0.0420
22	1.4545	0.0413
23	1.4951	0.0406
24	1.5350	0.0399
25	1.5743	0.0393
26	1.6129	0.0387
27	1.6510	0.0381
28	1.6886	0.0376
29	1.7256	0.0371
30	1.7622	0.0366
31	1.7983	0.0361
32	1.8340	0.0357
33	1.8693	0.0352
34	1.9041	0.0348
35	1.9386	0.0345
36	1.9726	0.0341
37	2.0064	0.0337
38	2.0397	0.0334
39	2.0728	0.0330
40	2.1055	0.0327
41	2.1379	0.0324
42	2.1700	0.0321
43	2.2018	0.0318
44	2.2333	0.0315
45	2.2646	0.0313
46	2.2955	0.0310
47	2.3263	0.0307
48	2.3568	0.0305
49	2.3870	0.0302
50	2.4170	0.0300
51	2.4468	0.0298
52	2.4764	0.0296
53	2.5057	0.0293
54	2.5349	0.0291
55	2.5638	0.0289
56	2.5925	0.0287
57	2.6210	0.0285
58	2.6494	0.0283
59	2.6775	0.0282
60	2.7055	0.0280
61	2.7333	0.0278
62	2.7610	0.0276
63	2.7884	0.0275
64	2.8157	0.0273
65	2.8428	0.0271
66	2.8698	0.0270
67	2.8966	0.0268
68	2.9233	0.0267
69	2.9498	0.0265
70	2.9762	0.0264
71	3.0024	0.0262
72	3.0285	0.0261
73	3.0550	0.0266
74	3.0815	0.0265
75	3.1078	0.0263
76	3.1340	0.0262
77	3.1601	0.0261
78	3.1861	0.0259
79	3.2119	0.0258
80	3.2376	0.0257
81	3.2632	0.0256

82	3.2887	0.0255
83	3.3140	0.0254
84	3.3393	0.0253
85	3.3644	0.0251
86	3.3894	0.0250
87	3.4144	0.0249
88	3.4392	0.0248
89	3.4639	0.0247
90	3.4885	0.0246
91	3.5130	0.0245
92	3.5375	0.0244
93	3.5618	0.0243
94	3.5860	0.0242
95	3.6101	0.0241
96	3.6342	0.0240
97	3.6581	0.0239
98	3.6820	0.0239
99	3.7057	0.0238
100	3.7294	0.0237
101	3.7530	0.0236
102	3.7765	0.0235
103	3.8000	0.0234
104	3.8233	0.0233
105	3.8466	0.0233
106	3.8697	0.0232
107	3.8928	0.0231
108	3.9158	0.0230
109	3.9388	0.0229
110	3.9617	0.0229
111	3.9844	0.0228
112	4.0072	0.0227
113	4.0298	0.0226
114	4.0524	0.0226
115	4.0749	0.0225
116	4.0973	0.0224
117	4.1196	0.0224
118	4.1419	0.0223
119	4.1641	0.0222
120	4.1863	0.0221
121	4.2083	0.0221
122	4.2303	0.0220
123	4.2523	0.0219
124	4.2742	0.0219
125	4.2960	0.0218
126	4.3177	0.0218
127	4.3394	0.0217
128	4.3610	0.0216
129	4.3826	0.0216
130	4.4041	0.0215
131	4.4256	0.0214
132	4.4469	0.0214
133	4.4683	0.0213
134	4.4895	0.0213
135	4.5107	0.0212
136	4.5319	0.0211
137	4.5530	0.0211
138	4.5740	0.0210
139	4.5950	0.0210
140	4.6159	0.0209
141	4.6368	0.0209
142	4.6576	0.0208
143	4.6783	0.0208
144	4.6991	0.0207
145	4.7197	0.0207
146	4.7403	0.0206
147	4.7609	0.0206
148	4.7814	0.0205
149	4.8018	0.0205
150	4.8222	0.0204
151	4.8426	0.0204
152	4.8629	0.0203

153	4.8831	0.0203
154	4.9033	0.0202
155	4.9235	0.0202
156	4.9436	0.0201
157	4.9636	0.0201
158	4.9837	0.0200
159	5.0036	0.0200
160	5.0236	0.0199
161	5.0434	0.0199
162	5.0633	0.0198
163	5.0830	0.0198
164	5.1028	0.0197
165	5.1225	0.0197
166	5.1421	0.0197
167	5.1618	0.0196
168	5.1813	0.0196
169	5.2008	0.0195
170	5.2203	0.0195
171	5.2398	0.0194
172	5.2592	0.0194
173	5.2785	0.0194
174	5.2978	0.0193
175	5.3171	0.0193
176	5.3364	0.0192
177	5.3556	0.0192
178	5.3747	0.0192
179	5.3938	0.0191
180	5.4129	0.0191
181	5.4319	0.0190
182	5.4510	0.0190
183	5.4699	0.0190
184	5.4888	0.0189
185	5.5077	0.0189
186	5.5266	0.0189
187	5.5454	0.0188
188	5.5642	0.0188
189	5.5829	0.0187
190	5.6016	0.0187
191	5.6203	0.0187
192	5.6389	0.0186
193	5.6575	0.0186
194	5.6761	0.0186
195	5.6946	0.0185
196	5.7131	0.0185
197	5.7315	0.0185
198	5.7500	0.0184
199	5.7683	0.0184
200	5.7867	0.0184
201	5.8050	0.0183
202	5.8233	0.0183
203	5.8416	0.0183
204	5.8598	0.0182
205	5.8780	0.0182
206	5.8961	0.0182
207	5.9143	0.0181
208	5.9323	0.0181
209	5.9504	0.0181
210	5.9684	0.0180
211	5.9864	0.0180
212	6.0044	0.0180
213	6.0223	0.0179
214	6.0402	0.0179
215	6.0581	0.0179
216	6.0760	0.0178
217	6.0938	0.0178
218	6.1116	0.0178
219	6.1293	0.0178
220	6.1470	0.0177
221	6.1647	0.0177
222	6.1824	0.0177
223	6.2000	0.0176

224	6.2176	0.0176
225	6.2352	0.0176
226	6.2528	0.0175
227	6.2703	0.0175
228	6.2878	0.0175
229	6.3052	0.0175
230	6.3227	0.0174
231	6.3401	0.0174
232	6.3575	0.0174
233	6.3748	0.0174
234	6.3921	0.0173
235	6.4094	0.0173
236	6.4267	0.0173
237	6.4440	0.0172
238	6.4612	0.0172
239	6.4784	0.0172
240	6.4955	0.0172
241	6.5127	0.0171
242	6.5298	0.0171
243	6.5469	0.0171
244	6.5639	0.0171
245	6.5810	0.0170
246	6.5980	0.0170
247	6.6150	0.0170
248	6.6319	0.0170
249	6.6489	0.0169
250	6.6658	0.0169
251	6.6827	0.0169
252	6.6995	0.0169
253	6.7164	0.0168
254	6.7332	0.0168
255	6.7500	0.0168
256	6.7667	0.0168
257	6.7835	0.0167
258	6.8002	0.0167
259	6.8169	0.0167
260	6.8336	0.0167
261	6.8502	0.0166
262	6.8668	0.0166
263	6.8834	0.0166
264	6.9000	0.0166
265	6.9166	0.0166
266	6.9331	0.0165
267	6.9496	0.0165
268	6.9661	0.0165
269	6.9825	0.0165
270	6.9990	0.0164
271	7.0154	0.0164
272	7.0318	0.0164
273	7.0482	0.0164
274	7.0645	0.0164
275	7.0809	0.0163
276	7.0972	0.0163
277	7.1134	0.0163
278	7.1297	0.0163
279	7.1460	0.0162
280	7.1622	0.0162
281	7.1784	0.0162
282	7.1946	0.0162
283	7.2107	0.0162
284	7.2269	0.0161
285	7.2430	0.0161
286	7.2591	0.0161
287	7.2751	0.0161
288	7.2912	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0083	0.0078

2	0.0161	0.0083	0.0078
3	0.0161	0.0083	0.0078
4	0.0161	0.0083	0.0078
5	0.0162	0.0083	0.0079
6	0.0162	0.0083	0.0079
7	0.0162	0.0084	0.0079
8	0.0163	0.0084	0.0079
9	0.0163	0.0084	0.0079
10	0.0163	0.0084	0.0079
11	0.0164	0.0084	0.0080
12	0.0164	0.0084	0.0080
13	0.0164	0.0085	0.0080
14	0.0165	0.0085	0.0080
15	0.0165	0.0085	0.0080
16	0.0165	0.0085	0.0080
17	0.0166	0.0085	0.0080
18	0.0166	0.0085	0.0081
19	0.0166	0.0086	0.0081
20	0.0167	0.0086	0.0081
21	0.0167	0.0086	0.0081
22	0.0167	0.0086	0.0081
23	0.0168	0.0086	0.0082
24	0.0168	0.0086	0.0082
25	0.0169	0.0087	0.0082
26	0.0169	0.0087	0.0082
27	0.0169	0.0087	0.0082
28	0.0170	0.0087	0.0082
29	0.0170	0.0088	0.0083
30	0.0170	0.0088	0.0083
31	0.0171	0.0088	0.0083
32	0.0171	0.0088	0.0083
33	0.0172	0.0088	0.0083
34	0.0172	0.0088	0.0083
35	0.0172	0.0089	0.0084
36	0.0173	0.0089	0.0084
37	0.0173	0.0089	0.0084
38	0.0174	0.0089	0.0084
39	0.0174	0.0090	0.0085
40	0.0174	0.0090	0.0085
41	0.0175	0.0090	0.0085
42	0.0175	0.0090	0.0085
43	0.0176	0.0090	0.0085
44	0.0176	0.0091	0.0086
45	0.0177	0.0091	0.0086
46	0.0177	0.0091	0.0086
47	0.0178	0.0091	0.0086
48	0.0178	0.0091	0.0086
49	0.0178	0.0092	0.0087
50	0.0179	0.0092	0.0087
51	0.0179	0.0092	0.0087
52	0.0180	0.0092	0.0087
53	0.0180	0.0093	0.0088
54	0.0181	0.0093	0.0088
55	0.0181	0.0093	0.0088
56	0.0182	0.0093	0.0088
57	0.0182	0.0094	0.0088
58	0.0183	0.0094	0.0089
59	0.0183	0.0094	0.0089
60	0.0184	0.0094	0.0089
61	0.0184	0.0095	0.0089
62	0.0185	0.0095	0.0090
63	0.0185	0.0095	0.0090
64	0.0186	0.0095	0.0090
65	0.0186	0.0096	0.0090
66	0.0187	0.0096	0.0091
67	0.0187	0.0096	0.0091
68	0.0188	0.0097	0.0091
69	0.0189	0.0097	0.0092
70	0.0189	0.0097	0.0092
71	0.0190	0.0098	0.0092
72	0.0190	0.0098	0.0092

73	0.0191	0.0098	0.0093
74	0.0191	0.0098	0.0093
75	0.0192	0.0099	0.0093
76	0.0192	0.0099	0.0093
77	0.0193	0.0099	0.0094
78	0.0194	0.0100	0.0094
79	0.0194	0.0100	0.0094
80	0.0195	0.0100	0.0095
81	0.0196	0.0101	0.0095
82	0.0196	0.0101	0.0095
83	0.0197	0.0101	0.0096
84	0.0197	0.0102	0.0096
85	0.0198	0.0102	0.0096
86	0.0199	0.0102	0.0097
87	0.0200	0.0103	0.0097
88	0.0200	0.0103	0.0097
89	0.0201	0.0103	0.0098
90	0.0202	0.0104	0.0098
91	0.0203	0.0104	0.0098
92	0.0203	0.0104	0.0099
93	0.0204	0.0105	0.0099
94	0.0205	0.0105	0.0099
95	0.0206	0.0106	0.0100
96	0.0206	0.0106	0.0100
97	0.0207	0.0107	0.0101
98	0.0208	0.0107	0.0101
99	0.0209	0.0107	0.0101
100	0.0209	0.0108	0.0102
101	0.0210	0.0108	0.0102
102	0.0211	0.0108	0.0102
103	0.0212	0.0109	0.0103
104	0.0213	0.0109	0.0103
105	0.0214	0.0110	0.0104
106	0.0214	0.0110	0.0104
107	0.0216	0.0111	0.0105
108	0.0216	0.0111	0.0105
109	0.0218	0.0112	0.0106
110	0.0218	0.0112	0.0106
111	0.0219	0.0113	0.0107
112	0.0220	0.0113	0.0107
113	0.0221	0.0114	0.0108
114	0.0222	0.0114	0.0108
115	0.0224	0.0115	0.0109
116	0.0224	0.0115	0.0109
117	0.0226	0.0116	0.0110
118	0.0226	0.0116	0.0110
119	0.0228	0.0117	0.0111
120	0.0229	0.0118	0.0111
121	0.0230	0.0118	0.0112
122	0.0231	0.0119	0.0112
123	0.0233	0.0120	0.0113
124	0.0233	0.0120	0.0113
125	0.0235	0.0121	0.0114
126	0.0236	0.0121	0.0115
127	0.0238	0.0122	0.0115
128	0.0239	0.0123	0.0116
129	0.0240	0.0124	0.0117
130	0.0241	0.0124	0.0117
131	0.0243	0.0125	0.0118
132	0.0244	0.0126	0.0119
133	0.0246	0.0127	0.0120
134	0.0247	0.0127	0.0120
135	0.0249	0.0128	0.0121
136	0.0250	0.0129	0.0122
137	0.0253	0.0130	0.0123
138	0.0254	0.0130	0.0123
139	0.0256	0.0132	0.0124
140	0.0257	0.0132	0.0125
141	0.0259	0.0133	0.0126
142	0.0261	0.0134	0.0127
143	0.0263	0.0135	0.0128

144	0.0265	0.0136	0.0128
145	0.0261	0.0134	0.0127
146	0.0262	0.0135	0.0127
147	0.0265	0.0136	0.0129
148	0.0267	0.0137	0.0129
149	0.0270	0.0139	0.0131
150	0.0271	0.0140	0.0132
151	0.0275	0.0141	0.0133
152	0.0276	0.0142	0.0134
153	0.0280	0.0144	0.0136
154	0.0282	0.0145	0.0137
155	0.0285	0.0147	0.0139
156	0.0287	0.0148	0.0140
157	0.0291	0.0150	0.0141
158	0.0293	0.0151	0.0143
159	0.0298	0.0153	0.0145
160	0.0300	0.0154	0.0146
161	0.0305	0.0157	0.0148
162	0.0307	0.0158	0.0149
163	0.0313	0.0161	0.0152
164	0.0315	0.0162	0.0153
165	0.0321	0.0165	0.0156
166	0.0324	0.0167	0.0157
167	0.0330	0.0170	0.0160
168	0.0334	0.0172	0.0162
169	0.0341	0.0175	0.0166
170	0.0345	0.0177	0.0167
171	0.0352	0.0181	0.0171
172	0.0357	0.0183	0.0173
173	0.0366	0.0188	0.0178
174	0.0371	0.0191	0.0180
175	0.0381	0.0196	0.0185
176	0.0387	0.0199	0.0188
177	0.0399	0.0205	0.0194
178	0.0406	0.0209	0.0197
179	0.0420	0.0216	0.0204
180	0.0428	0.0220	0.0208
181	0.0446	0.0230	0.0217
182	0.0457	0.0235	0.0222
183	0.0480	0.0247	0.0233
184	0.0493	0.0254	0.0239
185	0.0258	0.0132	0.0125
186	0.0275	0.0141	0.0133
187	0.0318	0.0164	0.0155
188	0.0348	0.0179	0.0169
189	0.0432	0.0222	0.0210
190	0.0498	0.0256	0.0242
191	0.0755	0.0389	0.0367
192	0.1096	0.0482	0.0615
193	0.4744	0.0482	0.4262
194	0.0595	0.0306	0.0289
195	0.0384	0.0198	0.0187
196	0.0294	0.0151	0.0143
197	0.0508	0.0261	0.0246
198	0.0468	0.0240	0.0227
199	0.0437	0.0225	0.0212
200	0.0413	0.0212	0.0200
201	0.0393	0.0202	0.0191
202	0.0376	0.0193	0.0182
203	0.0361	0.0186	0.0175
204	0.0348	0.0179	0.0169
205	0.0337	0.0173	0.0164
206	0.0327	0.0168	0.0159
207	0.0318	0.0164	0.0154
208	0.0310	0.0159	0.0151
209	0.0302	0.0156	0.0147
210	0.0296	0.0152	0.0144
211	0.0289	0.0149	0.0140
212	0.0283	0.0146	0.0138
213	0.0278	0.0143	0.0135
214	0.0273	0.0140	0.0133

215	0.0268	0.0138	0.0130
216	0.0264	0.0136	0.0128
217	0.0266	0.0137	0.0129
218	0.0262	0.0135	0.0127
219	0.0258	0.0133	0.0125
220	0.0255	0.0131	0.0124
221	0.0251	0.0129	0.0122
222	0.0248	0.0128	0.0121
223	0.0245	0.0126	0.0119
224	0.0242	0.0125	0.0118
225	0.0239	0.0123	0.0116
226	0.0237	0.0122	0.0115
227	0.0234	0.0120	0.0114
228	0.0232	0.0119	0.0113
229	0.0229	0.0118	0.0111
230	0.0227	0.0117	0.0110
231	0.0225	0.0116	0.0109
232	0.0223	0.0115	0.0108
233	0.0221	0.0114	0.0107
234	0.0219	0.0113	0.0106
235	0.0217	0.0112	0.0105
236	0.0215	0.0111	0.0104
237	0.0213	0.0110	0.0104
238	0.0211	0.0109	0.0103
239	0.0210	0.0108	0.0102
240	0.0208	0.0107	0.0101
241	0.0207	0.0106	0.0100
242	0.0205	0.0105	0.0100
243	0.0204	0.0105	0.0099
244	0.0202	0.0104	0.0098
245	0.0201	0.0103	0.0097
246	0.0199	0.0102	0.0097
247	0.0198	0.0102	0.0096
248	0.0197	0.0101	0.0095
249	0.0195	0.0100	0.0095
250	0.0194	0.0100	0.0094
251	0.0193	0.0099	0.0094
252	0.0192	0.0099	0.0093
253	0.0190	0.0098	0.0092
254	0.0189	0.0097	0.0092
255	0.0188	0.0097	0.0091
256	0.0187	0.0096	0.0091
257	0.0186	0.0096	0.0090
258	0.0185	0.0095	0.0090
259	0.0184	0.0095	0.0089
260	0.0183	0.0094	0.0089
261	0.0182	0.0094	0.0088
262	0.0181	0.0093	0.0088
263	0.0180	0.0093	0.0087
264	0.0179	0.0092	0.0087
265	0.0178	0.0092	0.0087
266	0.0177	0.0091	0.0086
267	0.0176	0.0091	0.0086
268	0.0175	0.0090	0.0085
269	0.0175	0.0090	0.0085
270	0.0174	0.0089	0.0084
271	0.0173	0.0089	0.0084
272	0.0172	0.0089	0.0084
273	0.0171	0.0088	0.0083
274	0.0171	0.0088	0.0083
275	0.0170	0.0087	0.0082
276	0.0169	0.0087	0.0082
277	0.0168	0.0087	0.0082
278	0.0168	0.0086	0.0081
279	0.0167	0.0086	0.0081
280	0.0166	0.0086	0.0081
281	0.0166	0.0085	0.0080
282	0.0165	0.0085	0.0080
283	0.0164	0.0084	0.0080
284	0.0164	0.0084	0.0079
285	0.0163	0.0084	0.0079

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      286              0.0162           0.0083              0.0079
      287              0.0162           0.0083              0.0078
      288              0.0161           0.0083              0.0078
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.55(In)
      Total effective rainfall =      3.74(In)
      Peak flow rate in flood hydrograph =     14.54(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0002      0.02  Q          |          |          |          |
  0+10       0.0010      0.12  Q          |          |          |          |
  0+15       0.0035      0.36  Q          |          |          |          |
  0+20       0.0067      0.46  Q          |          |          |          |
  0+25       0.0102      0.52  VQ         |          |          |          |
  0+30       0.0140      0.55  VQ         |          |          |          |
  0+35       0.0180      0.58  VQ         |          |          |          |
  0+40       0.0221      0.60  VQ         |          |          |          |
  0+45       0.0263      0.61  VQ         |          |          |          |
  0+50       0.0305      0.61  VQ         |          |          |          |
  0+55       0.0348      0.62  VQ         |          |          |          |
  1+ 0       0.0390      0.62  VQ         |          |          |          |
  1+ 5       0.0433      0.62  VQ         |          |          |          |
  1+10       0.0476      0.63  VQ         |          |          |          |
  1+15       0.0520      0.63  |Q         |          |          |          |
  1+20       0.0563      0.63  |Q         |          |          |          |
  1+25       0.0607      0.63  |Q         |          |          |          |
  1+30       0.0650      0.63  |Q         |          |          |          |
  1+35       0.0694      0.63  |Q         |          |          |          |
  1+40       0.0738      0.64  |Q         |          |          |          |
  1+45       0.0782      0.64  |Q         |          |          |          |
  1+50       0.0826      0.64  |Q         |          |          |          |
  1+55       0.0870      0.64  |Q         |          |          |          |
  2+ 0       0.0914      0.64  |Q         |          |          |          |
  2+ 5       0.0958      0.64  |Q         |          |          |          |
  2+10       0.1002      0.64  |Q         |          |          |          |
  2+15       0.1047      0.65  |QV        |          |          |          |
  2+20       0.1091      0.65  |QV        |          |          |          |
  2+25       0.1136      0.65  |QV        |          |          |          |
  2+30       0.1181      0.65  |QV        |          |          |          |
  2+35       0.1226      0.65  |QV        |          |          |          |
  2+40       0.1270      0.65  |QV        |          |          |          |
  2+45       0.1315      0.65  |QV        |          |          |          |
  2+50       0.1361      0.66  |QV        |          |          |          |
  2+55       0.1406      0.66  |QV        |          |          |          |
  3+ 0       0.1451      0.66  |QV        |          |          |          |
  3+ 5       0.1497      0.66  |QV        |          |          |          |
  3+10       0.1542      0.66  |Q V       |          |          |          |
  3+15       0.1588      0.66  |Q V       |          |          |          |
  3+20       0.1634      0.66  |Q V       |          |          |          |
  3+25       0.1679      0.67  |Q V       |          |          |          |
  3+30       0.1725      0.67  |Q V       |          |          |          |
  3+35       0.1772      0.67  |Q V       |          |          |          |
  3+40       0.1818      0.67  |Q V       |          |          |          |
  3+45       0.1864      0.67  |Q V       |          |          |          |
  3+50       0.1910      0.67  |Q V       |          |          |          |
  3+55       0.1957      0.68  |Q V       |          |          |          |
  4+ 0       0.2004      0.68  |Q V       |          |          |          |
  4+ 5       0.2050      0.68  |Q  V      |          |          |          |
  4+10       0.2097      0.68  |Q  V      |          |          |          |
  4+15       0.2144      0.68  |Q  V      |          |          |          |
  4+20       0.2191      0.68  |Q  V      |          |          |          |
  4+25       0.2239      0.69  |Q  V      |          |          |          |
```

```
 4+30      0.2286      0.69  |Q  V     |          |          |          |
 4+35      0.2334      0.69  |Q  V     |          |          |          |
 4+40      0.2381      0.69  |Q  V     |          |          |          |
 4+45      0.2429      0.69  |Q  V     |          |          |          |
 4+50      0.2477      0.69  |Q  V     |          |          |          |
 4+55      0.2525      0.70  |Q  V     |          |          |          |
 5+ 0      0.2573      0.70  |Q   V    |          |          |          |
 5+ 5      0.2621      0.70  |Q   V    |          |          |          |
 5+10      0.2669      0.70  |Q   V    |          |          |          |
 5+15      0.2718      0.70  |Q   V    |          |          |          |
 5+20      0.2767      0.71  |Q   V    |          |          |          |
 5+25      0.2815      0.71  |Q   V    |          |          |          |
 5+30      0.2864      0.71  |Q   V    |          |          |          |
 5+35      0.2913      0.71  |Q   V    |          |          |          |
 5+40      0.2963      0.71  |Q   V    |          |          |          |
 5+45      0.3012      0.72  |Q   V    |          |          |          |
 5+50      0.3062      0.72  |Q    V   |          |          |          |
 5+55      0.3111      0.72  |Q    V   |          |          |          |
 6+ 0      0.3161      0.72  |Q    V   |          |          |          |
 6+ 5      0.3211      0.73  |Q    V   |          |          |          |
 6+10      0.3261      0.73  |Q    V   |          |          |          |
 6+15      0.3311      0.73  |Q    V   |          |          |          |
 6+20      0.3362      0.73  |Q    V   |          |          |          |
 6+25      0.3412      0.73  |Q    V   |          |          |          |
 6+30      0.3463      0.74  |Q    V   |          |          |          |
 6+35      0.3514      0.74  |Q    V   |          |          |          |
 6+40      0.3565      0.74  |Q     V  |          |          |          |
 6+45      0.3616      0.74  |Q     V  |          |          |          |
 6+50      0.3667      0.75  |Q     V  |          |          |          |
 6+55      0.3719      0.75  |Q     V  |          |          |          |
 7+ 0      0.3770      0.75  |Q     V  |          |          |          |
 7+ 5      0.3822      0.75  |Q     V  |          |          |          |
 7+10      0.3874      0.76  |Q     V  |          |          |          |
 7+15      0.3926      0.76  |Q     V  |          |          |          |
 7+20      0.3979      0.76  |Q     V  |          |          |          |
 7+25      0.4031      0.76  |Q     V  |          |          |          |
 7+30      0.4084      0.77  |Q      V |          |          |          |
 7+35      0.4137      0.77  |Q      V |          |          |          |
 7+40      0.4190      0.77  |Q      V |          |          |          |
 7+45      0.4243      0.77  |Q      V |          |          |          |
 7+50      0.4297      0.78  |Q      V |          |          |          |
 7+55      0.4351      0.78  |Q      V |          |          |          |
 8+ 0      0.4404      0.78  |Q      V |          |          |          |
 8+ 5      0.4459      0.79  |Q      V |          |          |          |
 8+10      0.4513      0.79  |Q      V |          |          |          |
 8+15      0.4567      0.79  |Q      V |          |          |          |
 8+20      0.4622      0.79  |Q       V|          |          |          |
 8+25      0.4677      0.80  |Q       V|          |          |          |
 8+30      0.4732      0.80  |Q       V|          |          |          |
 8+35      0.4787      0.80  |Q       V|          |          |          |
 8+40      0.4843      0.81  |Q       V|          |          |          |
 8+45      0.4899      0.81  |Q       V|          |          |          |
 8+50      0.4955      0.81  |Q       V|          |          |          |
 8+55      0.5011      0.82  |Q       V|          |          |          |
 9+ 0      0.5067      0.82  |Q       V|          |          |          |
 9+ 5      0.5124      0.82  |Q        V          |          |          |
 9+10      0.5181      0.83  |Q        V          |          |          |
 9+15      0.5238      0.83  |Q        V          |          |          |
 9+20      0.5296      0.83  |Q        V          |          |          |
 9+25      0.5353      0.84  |Q        V          |          |          |
 9+30      0.5411      0.84  |Q        V          |          |          |
 9+35      0.5470      0.85  |Q        V          |          |          |
 9+40      0.5528      0.85  |Q        V          |          |          |
 9+45      0.5587      0.85  |Q        V          |          |          |
 9+50      0.5646      0.86  |Q         |V         |          |          |
 9+55      0.5705      0.86  |Q         |V         |          |          |
10+ 0      0.5765      0.87  |Q         |V         |          |          |
10+ 5      0.5825      0.87  |Q         |V         |          |          |
10+10      0.5885      0.87  |Q         |V         |          |          |
10+15      0.5945      0.88  |Q         |V         |          |          |
10+20      0.6006      0.88  |Q         |V         |          |          |
```

```
10+25       0.6067      0.89  |Q        |V        |         |         |
10+30       0.6129      0.89  |Q        | V       |         |         |
10+35       0.6190      0.90  |Q        | V       |         |         |
10+40       0.6253      0.90  |Q        | V       |         |         |
10+45       0.6315      0.91  |Q        | V       |         |         |
10+50       0.6378      0.91  |Q        | V       |         |         |
10+55       0.6441      0.92  |Q        | V       |         |         |
11+ 0       0.6504      0.92  |Q        | V       |         |         |
11+ 5       0.6568      0.93  |Q        | V       |         |         |
11+10       0.6632      0.93  |Q        |  V      |         |         |
11+15       0.6697      0.94  |Q        |  V      |         |         |
11+20       0.6762      0.94  |Q        |  V      |         |         |
11+25       0.6828      0.95  |Q        |  V      |         |         |
11+30       0.6893      0.96  |Q        |  V      |         |         |
11+35       0.6960      0.96  |Q        |  V      |         |         |
11+40       0.7026      0.97  |Q        |  V      |         |         |
11+45       0.7093      0.98  |Q        |  V      |         |         |
11+50       0.7161      0.98  |Q        |   V     |         |         |
11+55       0.7229      0.99  |Q        |   V     |         |         |
12+ 0       0.7298      1.00  |Q        |   V     |         |         |
12+ 5       0.7367      1.00  | Q       |   V     |         |         |
12+10       0.7436      1.00  | Q       |   V     |         |         |
12+15       0.7505      1.00  | Q       |   V     |         |         |
12+20       0.7574      1.01  | Q       |   V     |         |         |
12+25       0.7644      1.01  | Q       |    V    |         |         |
12+30       0.7714      1.02  | Q       |    V    |         |         |
12+35       0.7785      1.03  | Q       |    V    |         |         |
12+40       0.7856      1.04  | Q       |    V    |         |         |
12+45       0.7928      1.04  | Q       |    V    |         |         |
12+50       0.8001      1.05  | Q       |    V    |         |         |
12+55       0.8074      1.06  | Q       |    V    |         |         |
13+ 0       0.8148      1.07  | Q       |     V   |         |         |
13+ 5       0.8223      1.08  | Q       |     V   |         |         |
13+10       0.8298      1.09  | Q       |     V   |         |         |
13+15       0.8374      1.11  | Q       |     V   |         |         |
13+20       0.8451      1.12  | Q       |     V   |         |         |
13+25       0.8529      1.13  | Q       |     V   |         |         |
13+30       0.8608      1.14  | Q       |     V   |         |         |
13+35       0.8687      1.16  | Q       |      V  |         |         |
13+40       0.8768      1.17  | Q       |      V  |         |         |
13+45       0.8849      1.18  | Q       |      V  |         |         |
13+50       0.8932      1.20  | Q       |      V  |         |         |
13+55       0.9016      1.22  | Q       |      V  |         |         |
14+ 0       0.9100      1.23  | Q       |      V  |         |         |
14+ 5       0.9187      1.25  | Q       |       V |         |         |
14+10       0.9274      1.27  | Q       |       V |         |         |
14+15       0.9363      1.29  | Q       |       V |         |         |
14+20       0.9453      1.31  | Q       |       V |         |         |
14+25       0.9544      1.33  | Q       |       V |         |         |
14+30       0.9638      1.35  | Q       |       V |         |         |
14+35       0.9733      1.38  | Q       |        V|         |         |
14+40       0.9829      1.40  | Q       |        V|         |         |
14+45       0.9928      1.43  | Q       |        V|         |         |
14+50       1.0029      1.46  | Q       |        V|         |         |
14+55       1.0132      1.50  | Q       |        V|         |         |
15+ 0       1.0238      1.53  |  Q      |         V         |         |
15+ 5       1.0346      1.58  |  Q      |         V         |         |
15+10       1.0458      1.62  |  Q      |         V         |         |
15+15       1.0572      1.67  |  Q      |         V         |         |
15+20       1.0691      1.72  |  Q      |         V         |         |
15+25       1.0811      1.75  |  Q      |         |V        |         |
15+30       1.0925      1.65  |  Q      |         |V        |         |
15+35       1.1017      1.34  | Q       |         |V        |         |
15+40       1.1104      1.27  | Q       |         |V        |         |
15+45       1.1194      1.30  | Q       |         |V        |         |
15+50       1.1290      1.39  | Q       |         | V       |         |
15+55       1.1400      1.60  |  Q      |         | V       |         |
16+ 0       1.1537      1.99  |  Q      |         | V       |         |
16+ 5       1.1803      3.86  |      Q  |         |  V      |         |
16+10       1.2374      8.30  |         |     Q   |   V     |         |
16+15       1.3376     14.54  |         |         |     V  Q|         |
```

```
16+20       1.3890      7.47  |          |   Q      |      V  |          |
16+25       1.4214      4.69  |          Q|          |      V  |          |
16+30       1.4459      3.57  |       Q  |          |       V |          |
16+35       1.4674      3.11  |      Q   |          |       V |          |
16+40       1.4855      2.63  |    Q     |          |        V|          |
16+45       1.5008      2.22  |   Q      |          |        V|          |
16+50       1.5136      1.86  |  Q       |          |        V|          |
16+55       1.5255      1.72  |  Q       |          |        V|          |
17+ 0       1.5366      1.62  |  Q       |          |         V          |
17+ 5       1.5473      1.56  |  Q       |          |         V          |
17+10       1.5575      1.48  | Q        |          |         V          |
17+15       1.5671      1.39  | Q        |          |         V          |
17+20       1.5761      1.32  | Q        |          |         V          |
17+25       1.5848      1.26  | Q        |          |         |V         |
17+30       1.5932      1.22  | Q        |          |         |V         |
17+35       1.6015      1.19  | Q        |          |         |V         |
17+40       1.6095      1.16  | Q        |          |         |V         |
17+45       1.6173      1.14  | Q        |          |         |V         |
17+50       1.6249      1.11  | Q        |          |         |V         |
17+55       1.6324      1.09  | Q        |          |         | V        |
18+ 0       1.6398      1.07  | Q        |          |         | V        |
18+ 5       1.6470      1.05  | Q        |          |         | V        |
18+10       1.6541      1.03  | Q        |          |         | V        |
18+15       1.6612      1.03  | Q        |          |         | V        |
18+20       1.6682      1.01  | Q        |          |         | V        |
18+25       1.6751      1.00  | Q        |          |         | V        |
18+30       1.6819      0.99  |Q         |          |         |  V       |
18+35       1.6886      0.98  |Q         |          |         |  V       |
18+40       1.6952      0.96  |Q         |          |         |  V       |
18+45       1.7018      0.95  |Q         |          |         |  V       |
18+50       1.7083      0.94  |Q         |          |         |  V       |
18+55       1.7147      0.93  |Q         |          |         |  V       |
19+ 0       1.7210      0.92  |Q         |          |         |  V       |
19+ 5       1.7272      0.91  |Q         |          |         |  V       |
19+10       1.7334      0.90  |Q         |          |         |   V      |
19+15       1.7395      0.89  |Q         |          |         |   V      |
19+20       1.7456      0.88  |Q         |          |         |   V      |
19+25       1.7516      0.87  |Q         |          |         |   V      |
19+30       1.7575      0.86  |Q         |          |         |   V      |
19+35       1.7634      0.85  |Q         |          |         |   V      |
19+40       1.7692      0.85  |Q         |          |         |   V      |
19+45       1.7750      0.84  |Q         |          |         |   V      |
19+50       1.7807      0.83  |Q         |          |         |   V      |
19+55       1.7864      0.82  |Q         |          |         |    V     |
20+ 0       1.7920      0.82  |Q         |          |         |    V     |
20+ 5       1.7976      0.81  |Q         |          |         |    V     |
20+10       1.8032      0.80  |Q         |          |         |    V     |
20+15       1.8087      0.80  |Q         |          |         |    V     |
20+20       1.8141      0.79  |Q         |          |         |    V     |
20+25       1.8195      0.79  |Q         |          |         |    V     |
20+30       1.8249      0.78  |Q         |          |         |    V     |
20+35       1.8302      0.77  |Q         |          |         |    V     |
20+40       1.8355      0.77  |Q         |          |         |     V    |
20+45       1.8408      0.76  |Q         |          |         |     V    |
20+50       1.8460      0.76  |Q         |          |         |     V    |
20+55       1.8512      0.75  |Q         |          |         |     V    |
21+ 0       1.8564      0.75  |Q         |          |         |     V    |
21+ 5       1.8615      0.74  |Q         |          |         |     V    |
21+10       1.8666      0.74  |Q         |          |         |     V    |
21+15       1.8716      0.73  |Q         |          |         |     V    |
21+20       1.8767      0.73  |Q         |          |         |     V    |
21+25       1.8816      0.73  |Q         |          |         |     V    |
21+30       1.8866      0.72  |Q         |          |         |      V   |
21+35       1.8916      0.72  |Q         |          |         |      V   |
21+40       1.8965      0.71  |Q         |          |         |      V   |
21+45       1.9013      0.71  |Q         |          |         |      V   |
21+50       1.9062      0.70  |Q         |          |         |      V   |
21+55       1.9110      0.70  |Q         |          |         |      V   |
22+ 0       1.9158      0.70  |Q         |          |         |      V   |
22+ 5       1.9206      0.69  |Q         |          |         |      V   |
22+10       1.9254      0.69  |Q         |          |         |      V   |
```

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  22+15       1.9301      0.69  |Q        |         |         |      V  |
  22+20       1.9348      0.68  |Q        |         |         |      V  |
  22+25       1.9395      0.68  |Q        |         |         |       V |
  22+30       1.9441      0.68  |Q        |         |         |       V |
  22+35       1.9488      0.67  |Q        |         |         |       V |
  22+40       1.9534      0.67  |Q        |         |         |       V |
  22+45       1.9580      0.67  |Q        |         |         |       V |
  22+50       1.9625      0.66  |Q        |         |         |       V |
  22+55       1.9671      0.66  |Q        |         |         |       V |
  23+ 0       1.9716      0.66  |Q        |         |         |       V |
  23+ 5       1.9761      0.65  |Q        |         |         |       V |
  23+10       1.9806      0.65  |Q        |         |         |       V |
  23+15       1.9850      0.65  |Q        |         |         |       V |
  23+20       1.9895      0.65  |Q        |         |         |        V|
  23+25       1.9939      0.64  |Q        |         |         |        V|
  23+30       1.9983      0.64  |Q        |         |         |        V|
  23+35       2.0027      0.64  |Q        |         |         |        V|
  23+40       2.0071      0.63  |Q        |         |         |        V|
  23+45       2.0114      0.63  |Q        |         |         |        V|
  23+50       2.0158      0.63  |Q        |         |         |        V|
  23+55       2.0201      0.63  |Q        |         |         |        V|
  24+ 0       2.0244      0.62  |Q        |         |         |        V|
  24+ 5       2.0285      0.60  |Q        |         |         |        V|
  24+10       2.0319      0.50  Q         |         |         |        V|
  24+15       2.0337      0.26  Q         |         |         |        V|
  24+20       2.0348      0.16  Q         |         |         |        V|
  24+25       2.0355      0.10  Q         |         |         |        V|
  24+30       2.0360      0.07  Q         |         |         |        V|
  24+35       2.0363      0.04  Q         |         |         |        V|
  24+40       2.0364      0.02  Q         |         |         |        V|
  24+45       2.0365      0.01  Q         |         |         |        V|
  24+50       2.0366      0.01  Q         |         |         |        V|
  24+55       2.0366      0.01  Q         |         |         |        V|
  25+ 0       2.0367      0.00  Q         |         |         |        V|
  25+ 5       2.0367      0.00  Q         |         |         |        V|
  25+10       2.0367      0.00  Q         |         |         |        V|
  25+15       2.0367      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'C' – 25 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
25 YEAR 24 HOUR STORM
DECEMBER 17, 2024
----------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.53            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.53            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.53           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.53            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.53            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.53           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      67.0          6.53      1.000     0.578    1.000    0.578

Area-averaged adjusted loss rate Fm (In/Hr) =  0.578

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
6.53	1.000	67.0	67.0	4.93	0.557

Area-averaged catchment yield fraction, Y = 0.557
Area-averaged low loss fraction, Yb = 0.443
User entry of time of concentration = 0.225 (hours)
++
Watershed area = 6.53(Ac.)
Catchment Lag time = 0.180 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 46.2963
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.578(In/Hr)
Average low loss rate fraction (Yb) = 0.443 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 6.53(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.569(In)
30-minute factor = 1.000 Adjusted rainfall = 0.974(In)
1-hour factor = 1.000 Adjusted rainfall = 1.199(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 78.97 (CFS))	
1	3.841	3.033
2	20.125	12.860
3	58.137	30.019
4	74.610	13.009
5	83.494	7.016
6	89.354	4.628
7	93.374	3.174
8	96.031	2.098
9	97.668	1.293
10	98.374	0.558
11	98.857	0.382
12	99.195	0.267
13	99.529	0.264
14	99.800	0.214
15	99.943	0.113
16	100.000	0.045

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5687	0.5687
2	0.7002	0.1315
3	0.7908	0.0906
4	0.8621	0.0713
5	0.9217	0.0597
6	0.9736	0.0518
7	1.0196	0.0461
8	1.0613	0.0417
9	1.0995	0.0382
10	1.1348	0.0353

11	1.1677	0.0329
12	1.1986	0.0309
13	1.2592	0.0606
14	1.3180	0.0588
15	1.3752	0.0572
16	1.4310	0.0558
17	1.4855	0.0545
18	1.5387	0.0532
19	1.5908	0.0521
20	1.6419	0.0511
21	1.6920	0.0501
22	1.7412	0.0492
23	1.7895	0.0483
24	1.8371	0.0475
25	1.8838	0.0468
26	1.9299	0.0461
27	1.9753	0.0454
28	2.0201	0.0448
29	2.0642	0.0441
30	2.1078	0.0436
31	2.1508	0.0430
32	2.1933	0.0425
33	2.2352	0.0420
34	2.2767	0.0415
35	2.3178	0.0410
36	2.3583	0.0406
37	2.3985	0.0401
38	2.4382	0.0397
39	2.4775	0.0393
40	2.5164	0.0389
41	2.5550	0.0386
42	2.5932	0.0382
43	2.6310	0.0379
44	2.6685	0.0375
45	2.7057	0.0372
46	2.7426	0.0369
47	2.7792	0.0366
48	2.8154	0.0363
49	2.8514	0.0360
50	2.8871	0.0357
51	2.9225	0.0354
52	2.9577	0.0352
53	2.9926	0.0349
54	3.0272	0.0346
55	3.0616	0.0344
56	3.0958	0.0342
57	3.1297	0.0339
58	3.1634	0.0337
59	3.1969	0.0335
60	3.2302	0.0333
61	3.2632	0.0330
62	3.2961	0.0328
63	3.3287	0.0326
64	3.3611	0.0324
65	3.3934	0.0322
66	3.4254	0.0321
67	3.4573	0.0319
68	3.4890	0.0317
69	3.5205	0.0315
70	3.5519	0.0313
71	3.5830	0.0312
72	3.6140	0.0310
73	3.6476	0.0336
74	3.6811	0.0335
75	3.7144	0.0333
76	3.7476	0.0332
77	3.7806	0.0330
78	3.8135	0.0329
79	3.8462	0.0328
80	3.8789	0.0326
81	3.9113	0.0325

82	3.9437	0.0323
83	3.9759	0.0322
84	4.0080	0.0321
85	4.0400	0.0320
86	4.0718	0.0318
87	4.1035	0.0317
88	4.1351	0.0316
89	4.1666	0.0315
90	4.1980	0.0314
91	4.2292	0.0313
92	4.2604	0.0311
93	4.2914	0.0310
94	4.3223	0.0309
95	4.3531	0.0308
96	4.3839	0.0307
97	4.4145	0.0306
98	4.4450	0.0305
99	4.4753	0.0304
100	4.5056	0.0303
101	4.5358	0.0302
102	4.5659	0.0301
103	4.5959	0.0300
104	4.6258	0.0299
105	4.6557	0.0298
106	4.6854	0.0297
107	4.7150	0.0296
108	4.7445	0.0295
109	4.7740	0.0294
110	4.8033	0.0294
111	4.8326	0.0293
112	4.8618	0.0292
113	4.8909	0.0291
114	4.9199	0.0290
115	4.9488	0.0289
116	4.9777	0.0288
117	5.0064	0.0288
118	5.0351	0.0287
119	5.0637	0.0286
120	5.0922	0.0285
121	5.1207	0.0284
122	5.1491	0.0284
123	5.1773	0.0283
124	5.2056	0.0282
125	5.2337	0.0281
126	5.2618	0.0281
127	5.2898	0.0280
128	5.3177	0.0279
129	5.3455	0.0279
130	5.3733	0.0278
131	5.4010	0.0277
132	5.4287	0.0276
133	5.4563	0.0276
134	5.4838	0.0275
135	5.5112	0.0274
136	5.5386	0.0274
137	5.5659	0.0273
138	5.5931	0.0272
139	5.6203	0.0272
140	5.6474	0.0271
141	5.6744	0.0270
142	5.7014	0.0270
143	5.7283	0.0269
144	5.7552	0.0269
145	5.7820	0.0268
146	5.8087	0.0267
147	5.8354	0.0267
148	5.8620	0.0266
149	5.8886	0.0266
150	5.9151	0.0265
151	5.9415	0.0264
152	5.9679	0.0264

153	5.9942	0.0263
154	6.0205	0.0263
155	6.0467	0.0262
156	6.0729	0.0262
157	6.0990	0.0261
158	6.1250	0.0260
159	6.1510	0.0260
160	6.1770	0.0259
161	6.2029	0.0259
162	6.2287	0.0258
163	6.2545	0.0258
164	6.2802	0.0257
165	6.3059	0.0257
166	6.3315	0.0256
167	6.3571	0.0256
168	6.3826	0.0255
169	6.4081	0.0255
170	6.4335	0.0254
171	6.4589	0.0254
172	6.4842	0.0253
173	6.5095	0.0253
174	6.5348	0.0252
175	6.5599	0.0252
176	6.5851	0.0251
177	6.6102	0.0251
178	6.6352	0.0250
179	6.6602	0.0250
180	6.6852	0.0250
181	6.7101	0.0249
182	6.7349	0.0249
183	6.7598	0.0248
184	6.7845	0.0248
185	6.8093	0.0247
186	6.8340	0.0247
187	6.8586	0.0246
188	6.8832	0.0246
189	6.9077	0.0246
190	6.9323	0.0245
191	6.9567	0.0245
192	6.9812	0.0244
193	7.0055	0.0244
194	7.0299	0.0243
195	7.0542	0.0243
196	7.0785	0.0243
197	7.1027	0.0242
198	7.1269	0.0242
199	7.1510	0.0241
200	7.1751	0.0241
201	7.1992	0.0241
202	7.2232	0.0240
203	7.2472	0.0240
204	7.2711	0.0239
205	7.2950	0.0239
206	7.3189	0.0239
207	7.3427	0.0238
208	7.3665	0.0238
209	7.3903	0.0238
210	7.4140	0.0237
211	7.4377	0.0237
212	7.4613	0.0236
213	7.4849	0.0236
214	7.5085	0.0236
215	7.5320	0.0235
216	7.5555	0.0235
217	7.5790	0.0235
218	7.6024	0.0234
219	7.6258	0.0234
220	7.6492	0.0234
221	7.6725	0.0233
222	7.6958	0.0233
223	7.7190	0.0233

224	7.7422	0.0232
225	7.7654	0.0232
226	7.7886	0.0232
227	7.8117	0.0231
228	7.8348	0.0231
229	7.8578	0.0231
230	7.8808	0.0230
231	7.9038	0.0230
232	7.9268	0.0230
233	7.9497	0.0229
234	7.9726	0.0229
235	7.9954	0.0229
236	8.0183	0.0228
237	8.0411	0.0228
238	8.0638	0.0228
239	8.0865	0.0227
240	8.1092	0.0227
241	8.1319	0.0227
242	8.1545	0.0226
243	8.1771	0.0226
244	8.1997	0.0226
245	8.2223	0.0225
246	8.2448	0.0225
247	8.2673	0.0225
248	8.2897	0.0225
249	8.3121	0.0224
250	8.3345	0.0224
251	8.3569	0.0224
252	8.3792	0.0223
253	8.4015	0.0223
254	8.4238	0.0223
255	8.4461	0.0222
256	8.4683	0.0222
257	8.4905	0.0222
258	8.5126	0.0222
259	8.5348	0.0221
260	8.5569	0.0221
261	8.5789	0.0221
262	8.6010	0.0221
263	8.6230	0.0220
264	8.6450	0.0220
265	8.6670	0.0220
266	8.6889	0.0219
267	8.7108	0.0219
268	8.7327	0.0219
269	8.7546	0.0219
270	8.7764	0.0218
271	8.7982	0.0218
272	8.8200	0.0218
273	8.8418	0.0218
274	8.8635	0.0217
275	8.8852	0.0217
276	8.9069	0.0217
277	8.9285	0.0216
278	8.9501	0.0216
279	8.9717	0.0216
280	8.9933	0.0216
281	9.0148	0.0215
282	9.0364	0.0215
283	9.0579	0.0215
284	9.0793	0.0215
285	9.1008	0.0214
286	9.1222	0.0214
287	9.1436	0.0214
288	9.1650	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0095	0.0119

2	0.0214	0.0095	0.0119
3	0.0214	0.0095	0.0119
4	0.0215	0.0095	0.0120
5	0.0215	0.0095	0.0120
6	0.0215	0.0095	0.0120
7	0.0216	0.0096	0.0120
8	0.0216	0.0096	0.0120
9	0.0217	0.0096	0.0121
10	0.0217	0.0096	0.0121
11	0.0218	0.0096	0.0121
12	0.0218	0.0096	0.0121
13	0.0218	0.0097	0.0122
14	0.0219	0.0097	0.0122
15	0.0219	0.0097	0.0122
16	0.0219	0.0097	0.0122
17	0.0220	0.0097	0.0123
18	0.0220	0.0098	0.0123
19	0.0221	0.0098	0.0123
20	0.0221	0.0098	0.0123
21	0.0222	0.0098	0.0123
22	0.0222	0.0098	0.0124
23	0.0222	0.0099	0.0124
24	0.0223	0.0099	0.0124
25	0.0223	0.0099	0.0124
26	0.0224	0.0099	0.0125
27	0.0224	0.0099	0.0125
28	0.0225	0.0099	0.0125
29	0.0225	0.0100	0.0125
30	0.0225	0.0100	0.0126
31	0.0226	0.0100	0.0126
32	0.0226	0.0100	0.0126
33	0.0227	0.0101	0.0126
34	0.0227	0.0101	0.0127
35	0.0228	0.0101	0.0127
36	0.0228	0.0101	0.0127
37	0.0229	0.0101	0.0127
38	0.0229	0.0102	0.0128
39	0.0230	0.0102	0.0128
40	0.0230	0.0102	0.0128
41	0.0231	0.0102	0.0129
42	0.0231	0.0102	0.0129
43	0.0232	0.0103	0.0129
44	0.0232	0.0103	0.0129
45	0.0233	0.0103	0.0130
46	0.0233	0.0103	0.0130
47	0.0234	0.0104	0.0130
48	0.0234	0.0104	0.0131
49	0.0235	0.0104	0.0131
50	0.0235	0.0104	0.0131
51	0.0236	0.0105	0.0132
52	0.0236	0.0105	0.0132
53	0.0237	0.0105	0.0132
54	0.0238	0.0105	0.0132
55	0.0238	0.0106	0.0133
56	0.0239	0.0106	0.0133
57	0.0239	0.0106	0.0133
58	0.0240	0.0106	0.0134
59	0.0241	0.0107	0.0134
60	0.0241	0.0107	0.0134
61	0.0242	0.0107	0.0135
62	0.0242	0.0107	0.0135
63	0.0243	0.0108	0.0135
64	0.0243	0.0108	0.0136
65	0.0244	0.0108	0.0136
66	0.0245	0.0108	0.0136
67	0.0246	0.0109	0.0137
68	0.0246	0.0109	0.0137
69	0.0247	0.0109	0.0138
70	0.0247	0.0110	0.0138
71	0.0248	0.0110	0.0138
72	0.0249	0.0110	0.0139

73	0.0250	0.0111	0.0139
74	0.0250	0.0111	0.0139
75	0.0251	0.0111	0.0140
76	0.0251	0.0111	0.0140
77	0.0252	0.0112	0.0141
78	0.0253	0.0112	0.0141
79	0.0254	0.0112	0.0141
80	0.0254	0.0113	0.0142
81	0.0255	0.0113	0.0142
82	0.0256	0.0113	0.0142
83	0.0257	0.0114	0.0143
84	0.0257	0.0114	0.0143
85	0.0258	0.0114	0.0144
86	0.0259	0.0115	0.0144
87	0.0260	0.0115	0.0145
88	0.0260	0.0115	0.0145
89	0.0262	0.0116	0.0146
90	0.0262	0.0116	0.0146
91	0.0263	0.0117	0.0147
92	0.0264	0.0117	0.0147
93	0.0265	0.0117	0.0148
94	0.0266	0.0118	0.0148
95	0.0267	0.0118	0.0149
96	0.0267	0.0118	0.0149
97	0.0269	0.0119	0.0150
98	0.0269	0.0119	0.0150
99	0.0270	0.0120	0.0151
100	0.0271	0.0120	0.0151
101	0.0272	0.0121	0.0152
102	0.0273	0.0121	0.0152
103	0.0274	0.0122	0.0153
104	0.0275	0.0122	0.0153
105	0.0276	0.0122	0.0154
106	0.0277	0.0123	0.0154
107	0.0279	0.0123	0.0155
108	0.0279	0.0124	0.0156
109	0.0281	0.0124	0.0156
110	0.0281	0.0125	0.0157
111	0.0283	0.0125	0.0158
112	0.0284	0.0126	0.0158
113	0.0285	0.0126	0.0159
114	0.0286	0.0127	0.0159
115	0.0288	0.0127	0.0160
116	0.0288	0.0128	0.0161
117	0.0290	0.0128	0.0162
118	0.0291	0.0129	0.0162
119	0.0293	0.0130	0.0163
120	0.0294	0.0130	0.0164
121	0.0295	0.0131	0.0165
122	0.0296	0.0131	0.0165
123	0.0298	0.0132	0.0166
124	0.0299	0.0132	0.0167
125	0.0301	0.0133	0.0168
126	0.0302	0.0134	0.0168
127	0.0304	0.0135	0.0169
128	0.0305	0.0135	0.0170
129	0.0307	0.0136	0.0171
130	0.0308	0.0136	0.0172
131	0.0310	0.0137	0.0173
132	0.0311	0.0138	0.0173
133	0.0314	0.0139	0.0175
134	0.0315	0.0139	0.0175
135	0.0317	0.0141	0.0177
136	0.0318	0.0141	0.0177
137	0.0321	0.0142	0.0179
138	0.0322	0.0143	0.0179
139	0.0325	0.0144	0.0181
140	0.0326	0.0144	0.0182
141	0.0329	0.0146	0.0183
142	0.0330	0.0146	0.0184
143	0.0333	0.0148	0.0186

144	0.0335	0.0148	0.0186
145	0.0310	0.0137	0.0173
146	0.0312	0.0138	0.0174
147	0.0315	0.0140	0.0176
148	0.0317	0.0140	0.0177
149	0.0321	0.0142	0.0179
150	0.0322	0.0143	0.0180
151	0.0326	0.0145	0.0182
152	0.0328	0.0145	0.0183
153	0.0333	0.0147	0.0185
154	0.0335	0.0148	0.0187
155	0.0339	0.0150	0.0189
156	0.0342	0.0151	0.0190
157	0.0346	0.0153	0.0193
158	0.0349	0.0155	0.0194
159	0.0354	0.0157	0.0197
160	0.0357	0.0158	0.0199
161	0.0363	0.0161	0.0202
162	0.0366	0.0162	0.0204
163	0.0372	0.0165	0.0207
164	0.0375	0.0166	0.0209
165	0.0382	0.0169	0.0213
166	0.0386	0.0171	0.0215
167	0.0393	0.0174	0.0219
168	0.0397	0.0176	0.0221
169	0.0406	0.0180	0.0226
170	0.0410	0.0182	0.0229
171	0.0420	0.0186	0.0234
172	0.0425	0.0188	0.0237
173	0.0436	0.0193	0.0243
174	0.0441	0.0196	0.0246
175	0.0454	0.0201	0.0253
176	0.0461	0.0204	0.0257
177	0.0475	0.0211	0.0265
178	0.0483	0.0214	0.0269
179	0.0501	0.0222	0.0279
180	0.0511	0.0226	0.0285
181	0.0532	0.0236	0.0297
182	0.0545	0.0241	0.0303
183	0.0572	0.0253	0.0319
184	0.0588	0.0261	0.0328
185	0.0309	0.0137	0.0172
186	0.0329	0.0146	0.0183
187	0.0382	0.0169	0.0213
188	0.0417	0.0185	0.0232
189	0.0518	0.0230	0.0289
190	0.0597	0.0264	0.0332
191	0.0906	0.0401	0.0505
192	0.1315	0.0482	0.0833
193	0.5687	0.0482	0.5206
194	0.0713	0.0316	0.0397
195	0.0461	0.0204	0.0257
196	0.0353	0.0156	0.0197
197	0.0606	0.0268	0.0338
198	0.0558	0.0247	0.0311
199	0.0521	0.0231	0.0290
200	0.0492	0.0218	0.0274
201	0.0468	0.0207	0.0261
202	0.0448	0.0198	0.0249
203	0.0430	0.0190	0.0240
204	0.0415	0.0184	0.0231
205	0.0401	0.0178	0.0224
206	0.0389	0.0172	0.0217
207	0.0379	0.0168	0.0211
208	0.0369	0.0163	0.0205
209	0.0360	0.0159	0.0200
210	0.0352	0.0156	0.0196
211	0.0344	0.0152	0.0192
212	0.0337	0.0149	0.0188
213	0.0330	0.0146	0.0184
214	0.0324	0.0144	0.0181

215	0.0319	0.0141	0.0178
216	0.0313	0.0139	0.0175
217	0.0336	0.0149	0.0187
218	0.0332	0.0147	0.0185
219	0.0328	0.0145	0.0182
220	0.0323	0.0143	0.0180
221	0.0320	0.0142	0.0178
222	0.0316	0.0140	0.0176
223	0.0313	0.0138	0.0174
224	0.0309	0.0137	0.0172
225	0.0306	0.0136	0.0170
226	0.0303	0.0134	0.0169
227	0.0300	0.0133	0.0167
228	0.0297	0.0132	0.0166
229	0.0294	0.0130	0.0164
230	0.0292	0.0129	0.0163
231	0.0289	0.0128	0.0161
232	0.0287	0.0127	0.0160
233	0.0284	0.0126	0.0158
234	0.0282	0.0125	0.0157
235	0.0280	0.0124	0.0156
236	0.0278	0.0123	0.0155
237	0.0276	0.0122	0.0154
238	0.0274	0.0121	0.0152
239	0.0272	0.0120	0.0151
240	0.0270	0.0120	0.0150
241	0.0268	0.0119	0.0149
242	0.0266	0.0118	0.0148
243	0.0264	0.0117	0.0147
244	0.0263	0.0116	0.0146
245	0.0261	0.0116	0.0145
246	0.0259	0.0115	0.0145
247	0.0258	0.0114	0.0144
248	0.0256	0.0114	0.0143
249	0.0255	0.0113	0.0142
250	0.0253	0.0112	0.0141
251	0.0252	0.0112	0.0140
252	0.0250	0.0111	0.0140
253	0.0249	0.0110	0.0139
254	0.0248	0.0110	0.0138
255	0.0246	0.0109	0.0137
256	0.0245	0.0109	0.0137
257	0.0244	0.0108	0.0136
258	0.0243	0.0107	0.0135
259	0.0241	0.0107	0.0134
260	0.0240	0.0106	0.0134
261	0.0239	0.0106	0.0133
262	0.0238	0.0105	0.0133
263	0.0237	0.0105	0.0132
264	0.0236	0.0104	0.0131
265	0.0235	0.0104	0.0131
266	0.0234	0.0103	0.0130
267	0.0233	0.0103	0.0130
268	0.0232	0.0103	0.0129
269	0.0231	0.0102	0.0128
270	0.0230	0.0102	0.0128
271	0.0229	0.0101	0.0127
272	0.0228	0.0101	0.0127
273	0.0227	0.0100	0.0126
274	0.0226	0.0100	0.0126
275	0.0225	0.0100	0.0125
276	0.0224	0.0099	0.0125
277	0.0223	0.0099	0.0124
278	0.0222	0.0098	0.0124
279	0.0221	0.0098	0.0123
280	0.0221	0.0098	0.0123
281	0.0220	0.0097	0.0122
282	0.0219	0.0097	0.0122
283	0.0218	0.0097	0.0121
284	0.0217	0.0096	0.0121
285	0.0216	0.0096	0.0121

```
      286              0.0216           0.0096              0.0120
      287              0.0215           0.0095              0.0120
      288              0.0214           0.0095              0.0119
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.85(In)
      Total effective rainfall =      5.32(In)
      Peak flow rate in flood hydrograph =     18.02(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0002      0.04  Q         |          |          |          |
  0+10       0.0016      0.19  Q         |          |          |          |
  0+15       0.0053      0.55  VQ        |          |          |          |
  0+20       0.0102      0.70  VQ        |          |          |          |
  0+25       0.0156      0.79  VQ        |          |          |          |
  0+30       0.0214      0.84  VQ        |          |          |          |
  0+35       0.0275      0.88  VQ        |          |          |          |
  0+40       0.0337      0.91  VQ        |          |          |          |
  0+45       0.0401      0.93  VQ        |          |          |          |
  0+50       0.0466      0.93  VQ        |          |          |          |
  0+55       0.0530      0.94  VQ        |          |          |          |
  1+ 0       0.0596      0.95  VQ        |          |          |          |
  1+ 5       0.0661      0.95  VQ        |          |          |          |
  1+10       0.0727      0.96  |Q        |          |          |          |
  1+15       0.0793      0.96  |Q        |          |          |          |
  1+20       0.0859      0.96  |Q        |          |          |          |
  1+25       0.0925      0.96  |Q        |          |          |          |
  1+30       0.0992      0.96  |Q        |          |          |          |
  1+35       0.1058      0.97  |Q        |          |          |          |
  1+40       0.1125      0.97  |Q        |          |          |          |
  1+45       0.1192      0.97  |Q        |          |          |          |
  1+50       0.1258      0.97  |Q        |          |          |          |
  1+55       0.1325      0.97  |Q        |          |          |          |
  2+ 0       0.1393      0.97  |Q        |          |          |          |
  2+ 5       0.1460      0.98  |QV       |          |          |          |
  2+10       0.1527      0.98  |QV       |          |          |          |
  2+15       0.1595      0.98  |QV       |          |          |          |
  2+20       0.1663      0.98  |QV       |          |          |          |
  2+25       0.1730      0.98  |QV       |          |          |          |
  2+30       0.1798      0.99  |QV       |          |          |          |
  2+35       0.1866      0.99  |QV       |          |          |          |
  2+40       0.1935      0.99  |QV       |          |          |          |
  2+45       0.2003      0.99  |QV       |          |          |          |
  2+50       0.2071      0.99  |QV       |          |          |          |
  2+55       0.2140      1.00  |QV       |          |          |          |
  3+ 0       0.2209      1.00  |Q V      |          |          |          |
  3+ 5       0.2278      1.00  | QV      |          |          |          |
  3+10       0.2347      1.00  | QV      |          |          |          |
  3+15       0.2416      1.00  | QV      |          |          |          |
  3+20       0.2485      1.01  | QV      |          |          |          |
  3+25       0.2555      1.01  | QV      |          |          |          |
  3+30       0.2624      1.01  | QV      |          |          |          |
  3+35       0.2694      1.01  | QV      |          |          |          |
  3+40       0.2764      1.02  | QV      |          |          |          |
  3+45       0.2834      1.02  | QV      |          |          |          |
  3+50       0.2904      1.02  | Q V     |          |          |          |
  3+55       0.2975      1.02  | Q V     |          |          |          |
  4+ 0       0.3045      1.02  | Q V     |          |          |          |
  4+ 5       0.3116      1.03  | Q V     |          |          |          |
  4+10       0.3187      1.03  | Q V     |          |          |          |
  4+15       0.3258      1.03  | Q V     |          |          |          |
  4+20       0.3329      1.03  | Q V     |          |          |          |
  4+25       0.3401      1.04  | Q V     |          |          |          |
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 4+30      0.3472      1.04  | Q V     |         |         |         |
 4+35      0.3544      1.04  | Q V     |         |         |         |
 4+40      0.3616      1.04  | Q V     |         |         |         |
 4+45      0.3688      1.05  | Q  V    |         |         |         |
 4+50      0.3760      1.05  | Q  V    |         |         |         |
 4+55      0.3832      1.05  | Q  V    |         |         |         |
 5+ 0      0.3905      1.05  | Q  V    |         |         |         |
 5+ 5      0.3977      1.06  | Q  V    |         |         |         |
 5+10      0.4050      1.06  | Q  V    |         |         |         |
 5+15      0.4123      1.06  | Q  V    |         |         |         |
 5+20      0.4197      1.06  | Q  V    |         |         |         |
 5+25      0.4270      1.07  | Q  V    |         |         |         |
 5+30      0.4344      1.07  | Q   V   |         |         |         |
 5+35      0.4418      1.07  | Q   V   |         |         |         |
 5+40      0.4492      1.07  | Q   V   |         |         |         |
 5+45      0.4566      1.08  | Q   V   |         |         |         |
 5+50      0.4640      1.08  | Q   V   |         |         |         |
 5+55      0.4715      1.08  | Q   V   |         |         |         |
 6+ 0      0.4790      1.09  | Q   V   |         |         |         |
 6+ 5      0.4865      1.09  | Q   V   |         |         |         |
 6+10      0.4940      1.09  | Q   V   |         |         |         |
 6+15      0.5015      1.09  | Q   V   |         |         |         |
 6+20      0.5091      1.10  | Q    V  |         |         |         |
 6+25      0.5167      1.10  | Q    V  |         |         |         |
 6+30      0.5243      1.10  | Q    V  |         |         |         |
 6+35      0.5319      1.11  | Q    V  |         |         |         |
 6+40      0.5395      1.11  | Q    V  |         |         |         |
 6+45      0.5472      1.11  | Q    V  |         |         |         |
 6+50      0.5549      1.12  | Q    V  |         |         |         |
 6+55      0.5626      1.12  | Q    V  |         |         |         |
 7+ 0      0.5703      1.12  | Q    V  |         |         |         |
 7+ 5      0.5781      1.13  | Q    V  |         |         |         |
 7+10      0.5859      1.13  | Q     V |         |         |         |
 7+15      0.5937      1.13  | Q     V |         |         |         |
 7+20      0.6015      1.14  | Q     V |         |         |         |
 7+25      0.6094      1.14  | Q     V |         |         |         |
 7+30      0.6172      1.14  | Q     V |         |         |         |
 7+35      0.6251      1.15  | Q     V |         |         |         |
 7+40      0.6331      1.15  | Q     V |         |         |         |
 7+45      0.6410      1.15  | Q     V |         |         |         |
 7+50      0.6490      1.16  | Q     V |         |         |         |
 7+55      0.6570      1.16  | Q      V|         |         |         |
 8+ 0      0.6650      1.17  | Q      V|         |         |         |
 8+ 5      0.6731      1.17  | Q      V|         |         |         |
 8+10      0.6812      1.17  | Q      V|         |         |         |
 8+15      0.6893      1.18  | Q      V|         |         |         |
 8+20      0.6974      1.18  | Q      V|         |         |         |
 8+25      0.7056      1.19  | Q      V|         |         |         |
 8+30      0.7138      1.19  | Q      V|         |         |         |
 8+35      0.7220      1.19  | Q      V|         |         |         |
 8+40      0.7302      1.20  | Q       V         |         |         |
 8+45      0.7385      1.20  | Q       V         |         |         |
 8+50      0.7468      1.21  | Q       V         |         |         |
 8+55      0.7552      1.21  | Q       V         |         |         |
 9+ 0      0.7636      1.22  | Q       V         |         |         |
 9+ 5      0.7720      1.22  | Q       V         |         |         |
 9+10      0.7804      1.23  | Q       V         |         |         |
 9+15      0.7889      1.23  | Q       V         |         |         |
 9+20      0.7974      1.23  | Q       |V        |         |         |
 9+25      0.8059      1.24  | Q       |V        |         |         |
 9+30      0.8145      1.24  | Q       |V        |         |         |
 9+35      0.8231      1.25  | Q       |V        |         |         |
 9+40      0.8317      1.25  | Q       |V        |         |         |
 9+45      0.8404      1.26  | Q       |V        |         |         |
 9+50      0.8491      1.27  | Q       |V        |         |         |
 9+55      0.8579      1.27  | Q       |V        |         |         |
10+ 0      0.8667      1.28  | Q       |V        |         |         |
10+ 5      0.8755      1.28  | Q       | V       |         |         |
10+10      0.8844      1.29  | Q       | V       |         |         |
10+15      0.8933      1.29  | Q       | V       |         |         |
10+20      0.9022      1.30  | Q       | V       |         |         |
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10+25       0.9112      1.31  | Q       | V       |         |         |
10+30       0.9202      1.31  | Q       | V       |         |         |
10+35       0.9293      1.32  | Q       | V       |         |         |
10+40       0.9384      1.32  | Q       | V       |         |         |
10+45       0.9476      1.33  | Q       |  V      |         |         |
10+50       0.9568      1.34  | Q       |  V      |         |         |
10+55       0.9661      1.34  | Q       |  V      |         |         |
11+ 0       0.9754      1.35  | Q       |  V      |         |         |
11+ 5       0.9847      1.36  | Q       |  V      |         |         |
11+10       0.9941      1.36  | Q       |  V      |         |         |
11+15       1.0036      1.37  | Q       |  V      |         |         |
11+20       1.0131      1.38  | Q       |   V     |         |         |
11+25       1.0226      1.39  | Q       |   V     |         |         |
11+30       1.0322      1.40  | Q       |   V     |         |         |
11+35       1.0419      1.40  | Q       |   V     |         |         |
11+40       1.0516      1.41  | Q       |   V     |         |         |
11+45       1.0614      1.42  | Q       |   V     |         |         |
11+50       1.0713      1.43  | Q       |   V     |         |         |
11+55       1.0812      1.44  | Q       |   V     |         |         |
12+ 0       1.0911      1.45  | Q       |    V    |         |         |
12+ 5       1.1011      1.45  | Q       |    V    |         |         |
12+10       1.1111      1.44  | Q       |    V    |         |         |
12+15       1.1207      1.41  | Q       |    V    |         |         |
12+20       1.1303      1.40  | Q       |    V    |         |         |
12+25       1.1400      1.40  | Q       |    V    |         |         |
12+30       1.1496      1.40  | Q       |    V    |         |         |
12+35       1.1593      1.41  | Q       |     V   |         |         |
12+40       1.1690      1.42  | Q       |     V   |         |         |
12+45       1.1788      1.43  | Q       |     V   |         |         |
12+50       1.1888      1.44  | Q       |     V   |         |         |
12+55       1.1987      1.45  | Q       |     V   |         |         |
13+ 0       1.2088      1.46  | Q       |     V   |         |         |
13+ 5       1.2190      1.48  | Q       |     V   |         |         |
13+10       1.2293      1.49  | Q       |     V   |         |         |
13+15       1.2397      1.51  |  Q      |      V  |         |         |
13+20       1.2502      1.52  |  Q      |      V  |         |         |
13+25       1.2608      1.54  |  Q      |      V  |         |         |
13+30       1.2716      1.56  |  Q      |      V  |         |         |
13+35       1.2824      1.58  |  Q      |      V  |         |         |
13+40       1.2934      1.60  |  Q      |      V  |         |         |
13+45       1.3045      1.62  |  Q      |       V |         |         |
13+50       1.3158      1.64  |  Q      |       V |         |         |
13+55       1.3272      1.66  |  Q      |       V |         |         |
14+ 0       1.3388      1.68  |  Q      |       V |         |         |
14+ 5       1.3506      1.71  |  Q      |       V |         |         |
14+10       1.3625      1.73  |  Q      |       V |         |         |
14+15       1.3746      1.76  |  Q      |        V|         |         |
14+20       1.3869      1.79  |  Q      |        V|         |         |
14+25       1.3994      1.82  |  Q      |        V|         |         |
14+30       1.4122      1.85  |  Q      |        V|         |         |
14+35       1.4251      1.88  |  Q      |        V|         |         |
14+40       1.4384      1.92  |  Q      |        V|         |         |
14+45       1.4519      1.96  |  Q      |         V         |         |
14+50       1.4656      2.00  |   Q     |         V         |         |
14+55       1.4798      2.05  |   Q     |         V         |         |
15+ 0       1.4942      2.10  |   Q     |         V         |         |
15+ 5       1.5090      2.15  |   Q     |         V         |         |
15+10       1.5243      2.21  |   Q     |         |V        |         |
15+15       1.5400      2.28  |   Q     |         |V        |         |
15+20       1.5562      2.35  |   Q     |         |V        |         |
15+25       1.5726      2.39  |   Q     |         |V        |         |
15+30       1.5882      2.26  |   Q     |         |V        |         |
15+35       1.6009      1.84  |  Q      |         | V       |         |
15+40       1.6129      1.74  |  Q      |         | V       |         |
15+45       1.6252      1.79  |  Q      |         | V       |         |
15+50       1.6384      1.92  |  Q      |         | V       |         |
15+55       1.6535      2.20  |   Q     |         | V       |         |
16+ 0       1.6723      2.73  |    Q    |         |  V      |         |
16+ 5       1.7074      5.09  |         Q         |  V      |         |
16+10       1.7799     10.53  |         |         |Q  V     |         |
16+15       1.9040     18.02  |         |         |     V   |     Q   |
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16+20       1.9688      9.41  |          |        Q |       V  |          |
16+25       2.0101      5.99  |          |Q         |       V  |          |
16+30       2.0417      4.60  |         Q|          |        V |          |
16+35       2.0697      4.06  |        Q |          |        V |          |
16+40       2.0936      3.47  |     Q    |          |        V |          |
16+45       2.1140      2.96  |    Q     |          |         V|          |
16+50       2.1313      2.51  |    Q     |          |         V|          |
16+55       2.1474      2.33  |   Q      |          |         V|          |
17+ 0       2.1625      2.19  |   Q      |          |         V|          |
17+ 5       2.1770      2.11  |   Q      |          |          V          |
17+10       2.1908      2.01  |   Q      |          |          V          |
17+15       2.2039      1.89  |  Q       |          |          V          |
17+20       2.2162      1.79  |  Q       |          |          V          |
17+25       2.2280      1.72  |  Q       |          |          V          |
17+30       2.2396      1.67  |  Q       |          |          V          |
17+35       2.2508      1.63  |  Q       |          |          |V         |
17+40       2.2617      1.59  |  Q       |          |          |V         |
17+45       2.2724      1.55  |  Q       |          |          |V         |
17+50       2.2828      1.52  |  Q       |          |          |V         |
17+55       2.2930      1.48  | Q        |          |          |V         |
18+ 0       2.3031      1.46  | Q        |          |          |V         |
18+ 5       2.3129      1.43  | Q        |          |          |V         |
18+10       2.3228      1.43  | Q        |          |          | V        |
18+15       2.3328      1.45  | Q        |          |          | V        |
18+20       2.3427      1.45  | Q        |          |          | V        |
18+25       2.3527      1.44  | Q        |          |          | V        |
18+30       2.3625      1.43  | Q        |          |          | V        |
18+35       2.3723      1.42  | Q        |          |          | V        |
18+40       2.3819      1.40  | Q        |          |          | V        |
18+45       2.3915      1.39  | Q        |          |          |  V       |
18+50       2.4009      1.37  | Q        |          |          |  V       |
18+55       2.4103      1.36  | Q        |          |          |  V       |
19+ 0       2.4195      1.35  | Q        |          |          |  V       |
19+ 5       2.4287      1.33  | Q        |          |          |  V       |
19+10       2.4378      1.32  | Q        |          |          |  V       |
19+15       2.4468      1.31  | Q        |          |          |  V       |
19+20       2.4557      1.29  | Q        |          |          |  V       |
19+25       2.4646      1.28  | Q        |          |          |   V      |
19+30       2.4733      1.27  | Q        |          |          |   V      |
19+35       2.4820      1.26  | Q        |          |          |   V      |
19+40       2.4906      1.25  | Q        |          |          |   V      |
19+45       2.4992      1.24  | Q        |          |          |   V      |
19+50       2.5076      1.23  | Q        |          |          |   V      |
19+55       2.5161      1.22  | Q        |          |          |   V      |
20+ 0       2.5244      1.21  | Q        |          |          |   V      |
20+ 5       2.5327      1.20  | Q        |          |          |    V     |
20+10       2.5409      1.20  | Q        |          |          |    V     |
20+15       2.5491      1.19  | Q        |          |          |    V     |
20+20       2.5572      1.18  | Q        |          |          |    V     |
20+25       2.5653      1.17  | Q        |          |          |    V     |
20+30       2.5733      1.16  | Q        |          |          |    V     |
20+35       2.5812      1.16  | Q        |          |          |    V     |
20+40       2.5891      1.15  | Q        |          |          |    V     |
20+45       2.5970      1.14  | Q        |          |          |    V     |
20+50       2.6048      1.13  | Q        |          |          |     V    |
20+55       2.6126      1.13  | Q        |          |          |     V    |
21+ 0       2.6203      1.12  | Q        |          |          |     V    |
21+ 5       2.6280      1.11  | Q        |          |          |     V    |
21+10       2.6356      1.11  | Q        |          |          |     V    |
21+15       2.6432      1.10  | Q        |          |          |     V    |
21+20       2.6507      1.10  | Q        |          |          |     V    |
21+25       2.6582      1.09  | Q        |          |          |     V    |
21+30       2.6657      1.08  | Q        |          |          |     V    |
21+35       2.6731      1.08  | Q        |          |          |     V    |
21+40       2.6805      1.07  | Q        |          |          |      V   |
21+45       2.6878      1.07  | Q        |          |          |      V   |
21+50       2.6952      1.06  | Q        |          |          |      V   |
21+55       2.7024      1.06  | Q        |          |          |      V   |
22+ 0       2.7097      1.05  | Q        |          |          |      V   |
22+ 5       2.7169      1.05  | Q        |          |          |      V   |
22+10       2.7241      1.04  | Q        |          |          |      V   |
```

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  22+15       2.7312      1.04  | Q       |         |         |      V  |
  22+20       2.7383      1.03  | Q       |         |         |      V  |
  22+25       2.7454      1.03  | Q       |         |         |      V  |
  22+30       2.7524      1.02  | Q       |         |         |       V |
  22+35       2.7594      1.02  | Q       |         |         |       V |
  22+40       2.7664      1.01  | Q       |         |         |       V |
  22+45       2.7734      1.01  | Q       |         |         |       V |
  22+50       2.7803      1.01  | Q       |         |         |       V |
  22+55       2.7872      1.00  | Q       |         |         |       V |
  23+ 0       2.7940      1.00  |Q        |         |         |       V |
  23+ 5       2.8009      0.99  |Q        |         |         |       V |
  23+10       2.8077      0.99  |Q        |         |         |       V |
  23+15       2.8145      0.98  |Q        |         |         |       V |
  23+20       2.8212      0.98  |Q        |         |         |        V|
  23+25       2.8280      0.98  |Q        |         |         |        V|
  23+30       2.8347      0.97  |Q        |         |         |        V|
  23+35       2.8413      0.97  |Q        |         |         |        V|
  23+40       2.8480      0.97  |Q        |         |         |        V|
  23+45       2.8546      0.96  |Q        |         |         |        V|
  23+50       2.8612      0.96  |Q        |         |         |        V|
  23+55       2.8678      0.96  |Q        |         |         |        V|
  24+ 0       2.8744      0.95  |Q        |         |         |        V|
  24+ 5       2.8807      0.91  |Q        |         |         |        V|
  24+10       2.8859      0.76  |Q        |         |         |        V|
  24+15       2.8886      0.40  Q         |         |         |        V|
  24+20       2.8903      0.24  Q         |         |         |        V|
  24+25       2.8913      0.16  Q         |         |         |        V|
  24+30       2.8920      0.10  Q         |         |         |        V|
  24+35       2.8925      0.06  Q         |         |         |        V|
  24+40       2.8927      0.04  Q         |         |         |        V|
  24+45       2.8929      0.02  Q         |         |         |        V|
  24+50       2.8930      0.02  Q         |         |         |        V|
  24+55       2.8931      0.01  Q         |         |         |        V|
  25+ 0       2.8931      0.01  Q         |         |         |        V|
  25+ 5       2.8931      0.00  Q         |         |         |        V|
  25+10       2.8931      0.00  Q         |         |         |        V|
  25+15       2.8932      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
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Area 'C' – 100 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
100 YEAR 24 HOUR STORM
DECEMBER 17, 2024
----------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.53            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.53            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.53           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.53            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.53            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.53           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      84.6          6.53      1.000     0.290    1.000    0.290

Area-averaged adjusted loss rate Fm (In/Hr) =  0.290

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
6.53	1.000	67.0	84.6	1.82	0.838

Area-averaged catchment yield fraction, Y = 0.838
Area-averaged low loss fraction, Yb = 0.162
User entry of time of concentration = 0.225 (hours)
++
Watershed area = 6.53(Ac.)
Catchment Lag time = 0.180 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 46.2963
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.290(In/Hr)
Average low loss rate fraction (Yb) = 0.162 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 6.53(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.712(In)
30-minute factor = 1.000 Adjusted rainfall = 1.218(In)
1-hour factor = 1.000 Adjusted rainfall = 1.500(In)
3-hour factor = 1.000 Adjusted rainfall = 2.942(In)
6-hour factor = 1.000 Adjusted rainfall = 4.500(In)
24-hour factor = 1.000 Adjusted rainfall = 12.000(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 78.97 (CFS))	
1	3.841	3.033
2	20.125	12.860
3	58.137	30.019
4	74.610	13.009
5	83.494	7.016
6	89.354	4.628
7	93.374	3.174
8	96.031	2.098
9	97.668	1.293
10	98.374	0.558
11	98.857	0.382
12	99.195	0.267
13	99.529	0.264
14	99.800	0.214
15	99.943	0.113
16	100.000	0.045

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7115	0.7115
2	0.8760	0.1645
3	0.9893	0.1133
4	1.0785	0.0892
5	1.1532	0.0747
6	1.2180	0.0648
7	1.2757	0.0576
8	1.3278	0.0521
9	1.3756	0.0478
10	1.4197	0.0442

11	1.4609	0.0412
12	1.4995	0.0386
13	1.5750	0.0755
14	1.6482	0.0732
15	1.7195	0.0713
16	1.7889	0.0694
17	1.8567	0.0678
18	1.9230	0.0663
19	1.9878	0.0648
20	2.0513	0.0635
21	2.1137	0.0623
22	2.1748	0.0612
23	2.2350	0.0601
24	2.2941	0.0591
25	2.3522	0.0582
26	2.4095	0.0573
27	2.4659	0.0564
28	2.5216	0.0556
29	2.5764	0.0549
30	2.6306	0.0541
31	2.6840	0.0534
32	2.7368	0.0528
33	2.7890	0.0521
34	2.8405	0.0515
35	2.8914	0.0510
36	2.9418	0.0504
37	2.9917	0.0498
38	3.0410	0.0493
39	3.0898	0.0488
40	3.1382	0.0483
41	3.1861	0.0479
42	3.2335	0.0474
43	3.2805	0.0470
44	3.3270	0.0466
45	3.3732	0.0462
46	3.4190	0.0458
47	3.4644	0.0454
48	3.5094	0.0450
49	3.5540	0.0447
50	3.5983	0.0443
51	3.6423	0.0440
52	3.6859	0.0436
53	3.7292	0.0433
54	3.7722	0.0430
55	3.8149	0.0427
56	3.8573	0.0424
57	3.8994	0.0421
58	3.9412	0.0418
59	3.9827	0.0415
60	4.0239	0.0413
61	4.0649	0.0410
62	4.1057	0.0407
63	4.1461	0.0405
64	4.1864	0.0402
65	4.2264	0.0400
66	4.2661	0.0398
67	4.3056	0.0395
68	4.3449	0.0393
69	4.3840	0.0391
70	4.4228	0.0389
71	4.4615	0.0386
72	4.4999	0.0384
73	4.5440	0.0441
74	4.5880	0.0440
75	4.6318	0.0438
76	4.6754	0.0436
77	4.7188	0.0434
78	4.7621	0.0433
79	4.8052	0.0431
80	4.8482	0.0430
81	4.8910	0.0428

82	4.9336	0.0426
83	4.9761	0.0425
84	5.0185	0.0423
85	5.0607	0.0422
86	5.1027	0.0421
87	5.1446	0.0419
88	5.1864	0.0418
89	5.2280	0.0416
90	5.2695	0.0415
91	5.3109	0.0414
92	5.3521	0.0412
93	5.3932	0.0411
94	5.4342	0.0410
95	5.4750	0.0408
96	5.5157	0.0407
97	5.5563	0.0406
98	5.5968	0.0405
99	5.6371	0.0403
100	5.6773	0.0402
101	5.7174	0.0401
102	5.7574	0.0400
103	5.7973	0.0399
104	5.8371	0.0398
105	5.8767	0.0397
106	5.9163	0.0395
107	5.9557	0.0394
108	5.9951	0.0393
109	6.0343	0.0392
110	6.0734	0.0391
111	6.1124	0.0390
112	6.1513	0.0389
113	6.1901	0.0388
114	6.2288	0.0387
115	6.2674	0.0386
116	6.3060	0.0385
117	6.3444	0.0384
118	6.3827	0.0383
119	6.4209	0.0382
120	6.4590	0.0381
121	6.4971	0.0380
122	6.5350	0.0379
123	6.5729	0.0379
124	6.6106	0.0378
125	6.6483	0.0377
126	6.6859	0.0376
127	6.7234	0.0375
128	6.7608	0.0374
129	6.7981	0.0373
130	6.8354	0.0372
131	6.8725	0.0372
132	6.9096	0.0371
133	6.9466	0.0370
134	6.9835	0.0369
135	7.0204	0.0368
136	7.0571	0.0368
137	7.0938	0.0367
138	7.1304	0.0366
139	7.1669	0.0365
140	7.2033	0.0364
141	7.2397	0.0364
142	7.2760	0.0363
143	7.3122	0.0362
144	7.3484	0.0361
145	7.3844	0.0361
146	7.4204	0.0360
147	7.4564	0.0359
148	7.4922	0.0359
149	7.5280	0.0358
150	7.5637	0.0357
151	7.5993	0.0356
152	7.6349	0.0356

153	7.6704	0.0355
154	7.7059	0.0354
155	7.7412	0.0354
156	7.7765	0.0353
157	7.8118	0.0352
158	7.8469	0.0352
159	7.8820	0.0351
160	7.9171	0.0350
161	7.9521	0.0350
162	7.9870	0.0349
163	8.0218	0.0349
164	8.0566	0.0348
165	8.0913	0.0347
166	8.1260	0.0347
167	8.1606	0.0346
168	8.1952	0.0345
169	8.2296	0.0345
170	8.2641	0.0344
171	8.2984	0.0344
172	8.3327	0.0343
173	8.3670	0.0342
174	8.4012	0.0342
175	8.4353	0.0341
176	8.4694	0.0341
177	8.5034	0.0340
178	8.5374	0.0340
179	8.5713	0.0339
180	8.6051	0.0339
181	8.6389	0.0338
182	8.6727	0.0337
183	8.7064	0.0337
184	8.7400	0.0336
185	8.7736	0.0336
186	8.8071	0.0335
187	8.8406	0.0335
188	8.8740	0.0334
189	8.9074	0.0334
190	8.9407	0.0333
191	8.9740	0.0333
192	9.0072	0.0332
193	9.0403	0.0332
194	9.0735	0.0331
195	9.1065	0.0331
196	9.1395	0.0330
197	9.1725	0.0330
198	9.2054	0.0329
199	9.2383	0.0329
200	9.2711	0.0328
201	9.3039	0.0328
202	9.3366	0.0327
203	9.3693	0.0327
204	9.4019	0.0326
205	9.4345	0.0326
206	9.4670	0.0325
207	9.4995	0.0325
208	9.5320	0.0324
209	9.5644	0.0324
210	9.5967	0.0324
211	9.6291	0.0323
212	9.6613	0.0323
213	9.6935	0.0322
214	9.7257	0.0322
215	9.7579	0.0321
216	9.7899	0.0321
217	9.8220	0.0320
218	9.8540	0.0320
219	9.8860	0.0320
220	9.9179	0.0319
221	9.9497	0.0319
222	9.9816	0.0318
223	10.0134	0.0318

224	10.0451	0.0317
225	10.0768	0.0317
226	10.1085	0.0317
227	10.1401	0.0316
228	10.1717	0.0316
229	10.2032	0.0315
230	10.2348	0.0315
231	10.2662	0.0315
232	10.2976	0.0314
233	10.3290	0.0314
234	10.3604	0.0313
235	10.3917	0.0313
236	10.4229	0.0313
237	10.4542	0.0312
238	10.4854	0.0312
239	10.5165	0.0312
240	10.5476	0.0311
241	10.5787	0.0311
242	10.6097	0.0310
243	10.6407	0.0310
244	10.6717	0.0310
245	10.7026	0.0309
246	10.7335	0.0309
247	10.7644	0.0309
248	10.7952	0.0308
249	10.8260	0.0308
250	10.8567	0.0307
251	10.8874	0.0307
252	10.9181	0.0307
253	10.9487	0.0306
254	10.9793	0.0306
255	11.0099	0.0306
256	11.0404	0.0305
257	11.0709	0.0305
258	11.1014	0.0305
259	11.1318	0.0304
260	11.1622	0.0304
261	11.1926	0.0304
262	11.2229	0.0303
263	11.2532	0.0303
264	11.2834	0.0303
265	11.3137	0.0302
266	11.3438	0.0302
267	11.3740	0.0302
268	11.4041	0.0301
269	11.4342	0.0301
270	11.4643	0.0301
271	11.4943	0.0300
272	11.5243	0.0300
273	11.5543	0.0300
274	11.5842	0.0299
275	11.6141	0.0299
276	11.6439	0.0299
277	11.6738	0.0298
278	11.7036	0.0298
279	11.7334	0.0298
280	11.7631	0.0297
281	11.7928	0.0297
282	11.8225	0.0297
283	11.8521	0.0296
284	11.8817	0.0296
285	11.9113	0.0296
286	11.9409	0.0296
287	11.9704	0.0295
288	11.9999	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0048	0.0247

2	0.0295	0.0048	0.0248
3	0.0296	0.0048	0.0248
4	0.0296	0.0048	0.0248
5	0.0297	0.0048	0.0249
6	0.0297	0.0048	0.0249
7	0.0298	0.0048	0.0250
8	0.0298	0.0048	0.0250
9	0.0299	0.0048	0.0250
10	0.0299	0.0048	0.0251
11	0.0300	0.0048	0.0251
12	0.0300	0.0048	0.0251
13	0.0301	0.0049	0.0252
14	0.0301	0.0049	0.0252
15	0.0302	0.0049	0.0253
16	0.0302	0.0049	0.0253
17	0.0303	0.0049	0.0254
18	0.0303	0.0049	0.0254
19	0.0304	0.0049	0.0255
20	0.0304	0.0049	0.0255
21	0.0305	0.0049	0.0255
22	0.0305	0.0049	0.0256
23	0.0306	0.0049	0.0256
24	0.0306	0.0049	0.0257
25	0.0307	0.0050	0.0257
26	0.0307	0.0050	0.0257
27	0.0308	0.0050	0.0258
28	0.0308	0.0050	0.0258
29	0.0309	0.0050	0.0259
30	0.0309	0.0050	0.0259
31	0.0310	0.0050	0.0260
32	0.0310	0.0050	0.0260
33	0.0311	0.0050	0.0261
34	0.0312	0.0050	0.0261
35	0.0312	0.0050	0.0262
36	0.0313	0.0051	0.0262
37	0.0313	0.0051	0.0263
38	0.0314	0.0051	0.0263
39	0.0315	0.0051	0.0264
40	0.0315	0.0051	0.0264
41	0.0316	0.0051	0.0265
42	0.0316	0.0051	0.0265
43	0.0317	0.0051	0.0266
44	0.0317	0.0051	0.0266
45	0.0318	0.0051	0.0267
46	0.0319	0.0051	0.0267
47	0.0320	0.0052	0.0268
48	0.0320	0.0052	0.0268
49	0.0321	0.0052	0.0269
50	0.0321	0.0052	0.0269
51	0.0322	0.0052	0.0270
52	0.0323	0.0052	0.0271
53	0.0324	0.0052	0.0271
54	0.0324	0.0052	0.0272
55	0.0325	0.0052	0.0272
56	0.0325	0.0053	0.0273
57	0.0326	0.0053	0.0274
58	0.0327	0.0053	0.0274
59	0.0328	0.0053	0.0275
60	0.0328	0.0053	0.0275
61	0.0329	0.0053	0.0276
62	0.0330	0.0053	0.0276
63	0.0331	0.0053	0.0277
64	0.0331	0.0053	0.0278
65	0.0332	0.0054	0.0279
66	0.0333	0.0054	0.0279
67	0.0334	0.0054	0.0280
68	0.0334	0.0054	0.0280
69	0.0335	0.0054	0.0281
70	0.0336	0.0054	0.0282
71	0.0337	0.0054	0.0282
72	0.0337	0.0054	0.0283

73	0.0339	0.0055	0.0284
74	0.0339	0.0055	0.0284
75	0.0340	0.0055	0.0285
76	0.0341	0.0055	0.0286
77	0.0342	0.0055	0.0287
78	0.0342	0.0055	0.0287
79	0.0344	0.0056	0.0288
80	0.0344	0.0056	0.0289
81	0.0345	0.0056	0.0290
82	0.0346	0.0056	0.0290
83	0.0347	0.0056	0.0291
84	0.0348	0.0056	0.0292
85	0.0349	0.0056	0.0293
86	0.0350	0.0056	0.0293
87	0.0351	0.0057	0.0294
88	0.0352	0.0057	0.0295
89	0.0353	0.0057	0.0296
90	0.0354	0.0057	0.0297
91	0.0355	0.0057	0.0298
92	0.0356	0.0057	0.0298
93	0.0357	0.0058	0.0299
94	0.0358	0.0058	0.0300
95	0.0359	0.0058	0.0301
96	0.0360	0.0058	0.0302
97	0.0361	0.0058	0.0303
98	0.0362	0.0058	0.0304
99	0.0364	0.0059	0.0305
100	0.0364	0.0059	0.0306
101	0.0366	0.0059	0.0307
102	0.0367	0.0059	0.0308
103	0.0368	0.0059	0.0309
104	0.0369	0.0060	0.0310
105	0.0371	0.0060	0.0311
106	0.0372	0.0060	0.0312
107	0.0373	0.0060	0.0313
108	0.0374	0.0060	0.0314
109	0.0376	0.0061	0.0315
110	0.0377	0.0061	0.0316
111	0.0379	0.0061	0.0317
112	0.0379	0.0061	0.0318
113	0.0381	0.0062	0.0320
114	0.0382	0.0062	0.0320
115	0.0384	0.0062	0.0322
116	0.0385	0.0062	0.0323
117	0.0387	0.0063	0.0325
118	0.0388	0.0063	0.0325
119	0.0390	0.0063	0.0327
120	0.0391	0.0063	0.0328
121	0.0393	0.0064	0.0330
122	0.0394	0.0064	0.0331
123	0.0397	0.0064	0.0333
124	0.0398	0.0064	0.0333
125	0.0400	0.0065	0.0335
126	0.0401	0.0065	0.0336
127	0.0403	0.0065	0.0338
128	0.0405	0.0065	0.0339
129	0.0407	0.0066	0.0341
130	0.0408	0.0066	0.0342
131	0.0411	0.0066	0.0345
132	0.0412	0.0067	0.0346
133	0.0415	0.0067	0.0348
134	0.0416	0.0067	0.0349
135	0.0419	0.0068	0.0351
136	0.0421	0.0068	0.0353
137	0.0423	0.0068	0.0355
138	0.0425	0.0069	0.0356
139	0.0428	0.0069	0.0359
140	0.0430	0.0069	0.0360
141	0.0433	0.0070	0.0363
142	0.0434	0.0070	0.0364
143	0.0438	0.0071	0.0367

144	0.0440	0.0071	0.0369
145	0.0384	0.0062	0.0322
146	0.0386	0.0062	0.0324
147	0.0391	0.0063	0.0328
148	0.0393	0.0063	0.0329
149	0.0398	0.0064	0.0333
150	0.0400	0.0065	0.0335
151	0.0405	0.0065	0.0339
152	0.0407	0.0066	0.0342
153	0.0413	0.0067	0.0346
154	0.0415	0.0067	0.0348
155	0.0421	0.0068	0.0353
156	0.0424	0.0068	0.0355
157	0.0430	0.0069	0.0360
158	0.0433	0.0070	0.0363
159	0.0440	0.0071	0.0369
160	0.0443	0.0072	0.0371
161	0.0450	0.0073	0.0377
162	0.0454	0.0073	0.0381
163	0.0462	0.0075	0.0387
164	0.0466	0.0075	0.0390
165	0.0474	0.0077	0.0398
166	0.0479	0.0077	0.0401
167	0.0488	0.0079	0.0409
168	0.0493	0.0080	0.0414
169	0.0504	0.0081	0.0423
170	0.0510	0.0082	0.0427
171	0.0521	0.0084	0.0437
172	0.0528	0.0085	0.0443
173	0.0541	0.0087	0.0454
174	0.0549	0.0089	0.0460
175	0.0564	0.0091	0.0473
176	0.0573	0.0093	0.0480
177	0.0591	0.0095	0.0496
178	0.0601	0.0097	0.0504
179	0.0623	0.0101	0.0523
180	0.0635	0.0103	0.0533
181	0.0663	0.0107	0.0556
182	0.0678	0.0109	0.0568
183	0.0713	0.0115	0.0597
184	0.0732	0.0118	0.0614
185	0.0386	0.0062	0.0324
186	0.0412	0.0067	0.0345
187	0.0478	0.0077	0.0400
188	0.0521	0.0084	0.0437
189	0.0648	0.0105	0.0544
190	0.0747	0.0121	0.0626
191	0.1133	0.0183	0.0950
192	0.1645	0.0242	0.1403
193	0.7115	0.0242	0.6874
194	0.0892	0.0144	0.0748
195	0.0576	0.0093	0.0483
196	0.0442	0.0071	0.0370
197	0.0755	0.0122	0.0633
198	0.0694	0.0112	0.0582
199	0.0648	0.0105	0.0544
200	0.0612	0.0099	0.0513
201	0.0582	0.0094	0.0488
202	0.0556	0.0090	0.0466
203	0.0534	0.0086	0.0448
204	0.0515	0.0083	0.0432
205	0.0498	0.0081	0.0418
206	0.0483	0.0078	0.0405
207	0.0470	0.0076	0.0394
208	0.0458	0.0074	0.0384
209	0.0447	0.0072	0.0374
210	0.0436	0.0070	0.0366
211	0.0427	0.0069	0.0358
212	0.0418	0.0068	0.0351
213	0.0410	0.0066	0.0344
214	0.0402	0.0065	0.0337

215	0.0395	0.0064	0.0331
216	0.0389	0.0063	0.0326
217	0.0441	0.0071	0.0370
218	0.0436	0.0070	0.0366
219	0.0431	0.0070	0.0362
220	0.0426	0.0069	0.0358
221	0.0422	0.0068	0.0354
222	0.0418	0.0067	0.0350
223	0.0414	0.0067	0.0347
224	0.0410	0.0066	0.0343
225	0.0406	0.0066	0.0340
226	0.0402	0.0065	0.0337
227	0.0399	0.0064	0.0334
228	0.0395	0.0064	0.0332
229	0.0392	0.0063	0.0329
230	0.0389	0.0063	0.0326
231	0.0386	0.0062	0.0324
232	0.0383	0.0062	0.0321
233	0.0380	0.0061	0.0319
234	0.0378	0.0061	0.0317
235	0.0375	0.0061	0.0314
236	0.0372	0.0060	0.0312
237	0.0370	0.0060	0.0310
238	0.0368	0.0059	0.0308
239	0.0365	0.0059	0.0306
240	0.0363	0.0059	0.0304
241	0.0361	0.0058	0.0302
242	0.0359	0.0058	0.0301
243	0.0356	0.0058	0.0299
244	0.0354	0.0057	0.0297
245	0.0352	0.0057	0.0295
246	0.0350	0.0057	0.0294
247	0.0349	0.0056	0.0292
248	0.0347	0.0056	0.0291
249	0.0345	0.0056	0.0289
250	0.0343	0.0055	0.0288
251	0.0341	0.0055	0.0286
252	0.0340	0.0055	0.0285
253	0.0338	0.0055	0.0283
254	0.0336	0.0054	0.0282
255	0.0335	0.0054	0.0281
256	0.0333	0.0054	0.0279
257	0.0332	0.0054	0.0278
258	0.0330	0.0053	0.0277
259	0.0329	0.0053	0.0276
260	0.0327	0.0053	0.0274
261	0.0326	0.0053	0.0273
262	0.0324	0.0052	0.0272
263	0.0323	0.0052	0.0271
264	0.0322	0.0052	0.0270
265	0.0320	0.0052	0.0269
266	0.0319	0.0052	0.0268
267	0.0318	0.0051	0.0267
268	0.0317	0.0051	0.0266
269	0.0315	0.0051	0.0264
270	0.0314	0.0051	0.0263
271	0.0313	0.0051	0.0262
272	0.0312	0.0050	0.0262
273	0.0311	0.0050	0.0261
274	0.0310	0.0050	0.0260
275	0.0309	0.0050	0.0259
276	0.0307	0.0050	0.0258
277	0.0306	0.0049	0.0257
278	0.0305	0.0049	0.0256
279	0.0304	0.0049	0.0255
280	0.0303	0.0049	0.0254
281	0.0302	0.0049	0.0253
282	0.0301	0.0049	0.0253
283	0.0300	0.0048	0.0252
284	0.0299	0.0048	0.0251
285	0.0298	0.0048	0.0250

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      286              0.0297           0.0048              0.0249
      287              0.0296           0.0048              0.0249
      288              0.0296           0.0048              0.0248
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      1.84(In)
      Total effective rainfall =     10.15(In)
      Peak flow rate in flood hydrograph =     24.92(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0005      0.08  Q          |          |          |          |
  0+10       0.0032      0.39  Q          |          |          |          |
  0+15       0.0110      1.14  VQ         |          |          |          |
  0+20       0.0211      1.46  VQ         |          |          |          |
  0+25       0.0324      1.64  V Q        |          |          |          |
  0+30       0.0444      1.75  V Q        |          |          |          |
  0+35       0.0570      1.83  V Q        |          |          |          |
  0+40       0.0701      1.89  V Q        |          |          |          |
  0+45       0.0833      1.92  V Q        |          |          |          |
  0+50       0.0967      1.94  V Q        |          |          |          |
  0+55       0.1101      1.95  V Q        |          |          |          |
  1+ 0       0.1236      1.96  V Q        |          |          |          |
  1+ 5       0.1372      1.97  V Q        |          |          |          |
  1+10       0.1508      1.98  |VQ        |          |          |          |
  1+15       0.1645      1.99  |VQ        |          |          |          |
  1+20       0.1782      1.99  |VQ        |          |          |          |
  1+25       0.1919      1.99  |VQ        |          |          |          |
  1+30       0.2057      2.00  |VQ        |          |          |          |
  1+35       0.2195      2.00  |VQ        |          |          |          |
  1+40       0.2333      2.00  |VQ        |          |          |          |
  1+45       0.2471      2.01  |VQ        |          |          |          |
  1+50       0.2609      2.01  |VQ        |          |          |          |
  1+55       0.2748      2.01  |VQ        |          |          |          |
  2+ 0       0.2887      2.02  | Q        |          |          |          |
  2+ 5       0.3026      2.02  | Q        |          |          |          |
  2+10       0.3165      2.02  | Q        |          |          |          |
  2+15       0.3305      2.03  | Q        |          |          |          |
  2+20       0.3445      2.03  | Q        |          |          |          |
  2+25       0.3585      2.03  | Q        |          |          |          |
  2+30       0.3725      2.04  | Q        |          |          |          |
  2+35       0.3866      2.04  | Q        |          |          |          |
  2+40       0.4007      2.05  | Q        |          |          |          |
  2+45       0.4148      2.05  | QV       |          |          |          |
  2+50       0.4289      2.05  | QV       |          |          |          |
  2+55       0.4431      2.06  | QV       |          |          |          |
  3+ 0       0.4573      2.06  | QV       |          |          |          |
  3+ 5       0.4715      2.06  | QV       |          |          |          |
  3+10       0.4857      2.07  | QV       |          |          |          |
  3+15       0.5000      2.07  | QV       |          |          |          |
  3+20       0.5143      2.08  | QV       |          |          |          |
  3+25       0.5286      2.08  | QV       |          |          |          |
  3+30       0.5430      2.08  | QV       |          |          |          |
  3+35       0.5573      2.09  | Q V      |          |          |          |
  3+40       0.5717      2.09  | Q V      |          |          |          |
  3+45       0.5862      2.10  | Q V      |          |          |          |
  3+50       0.6006      2.10  | Q V      |          |          |          |
  3+55       0.6151      2.10  | Q V      |          |          |          |
  4+ 0       0.6296      2.11  | Q V      |          |          |          |
  4+ 5       0.6442      2.11  | Q V      |          |          |          |
  4+10       0.6588      2.12  | Q V      |          |          |          |
  4+15       0.6734      2.12  | Q V      |          |          |          |
  4+20       0.6880      2.12  | Q V      |          |          |          |
  4+25       0.7027      2.13  | Q  V     |          |          |          |
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 4+30      0.7174      2.13  | Q  V    |         |         |         |
 4+35      0.7321      2.14  | Q  V    |         |         |         |
 4+40      0.7468      2.14  | Q  V    |         |         |         |
 4+45      0.7616      2.15  | Q  V    |         |         |         |
 4+50      0.7764      2.15  | Q  V    |         |         |         |
 4+55      0.7913      2.16  | Q  V    |         |         |         |
 5+ 0      0.8062      2.16  | Q  V    |         |         |         |
 5+ 5      0.8211      2.17  | Q  V    |         |         |         |
 5+10      0.8360      2.17  | Q   V   |         |         |         |
 5+15      0.8510      2.17  | Q   V   |         |         |         |
 5+20      0.8660      2.18  | Q   V   |         |         |         |
 5+25      0.8811      2.18  | Q   V   |         |         |         |
 5+30      0.8961      2.19  | Q   V   |         |         |         |
 5+35      0.9113      2.19  | Q   V   |         |         |         |
 5+40      0.9264      2.20  | Q   V   |         |         |         |
 5+45      0.9416      2.20  | Q   V   |         |         |         |
 5+50      0.9568      2.21  | Q   V   |         |         |         |
 5+55      0.9721      2.21  | Q    V  |         |         |         |
 6+ 0      0.9873      2.22  | Q    V  |         |         |         |
 6+ 5      1.0027      2.23  | Q    V  |         |         |         |
 6+10      1.0180      2.23  | Q    V  |         |         |         |
 6+15      1.0334      2.24  | Q    V  |         |         |         |
 6+20      1.0489      2.24  | Q    V  |         |         |         |
 6+25      1.0643      2.25  | Q    V  |         |         |         |
 6+30      1.0799      2.25  |  Q   V  |         |         |         |
 6+35      1.0954      2.26  |  Q   V  |         |         |         |
 6+40      1.1110      2.26  |  Q    V |         |         |         |
 6+45      1.1266      2.27  |  Q    V |         |         |         |
 6+50      1.1423      2.28  |  Q    V |         |         |         |
 6+55      1.1580      2.28  |  Q    V |         |         |         |
 7+ 0      1.1738      2.29  |  Q    V |         |         |         |
 7+ 5      1.1896      2.29  |  Q    V |         |         |         |
 7+10      1.2054      2.30  |  Q    V |         |         |         |
 7+15      1.2213      2.31  |  Q    V |         |         |         |
 7+20      1.2372      2.31  |  Q    V |         |         |         |
 7+25      1.2532      2.32  |  Q     V|         |         |         |
 7+30      1.2692      2.32  |  Q     V|         |         |         |
 7+35      1.2852      2.33  |  Q     V|         |         |         |
 7+40      1.3013      2.34  |  Q     V|         |         |         |
 7+45      1.3175      2.34  |  Q     V|         |         |         |
 7+50      1.3337      2.35  |  Q     V|         |         |         |
 7+55      1.3499      2.36  |  Q     V|         |         |         |
 8+ 0      1.3662      2.36  |  Q     V|         |         |         |
 8+ 5      1.3825      2.37  |  Q      V         |         |         |
 8+10      1.3989      2.38  |  Q      V         |         |         |
 8+15      1.4153      2.39  |  Q      V         |         |         |
 8+20      1.4318      2.39  |  Q      V         |         |         |
 8+25      1.4483      2.40  |  Q      V         |         |         |
 8+30      1.4649      2.41  |  Q      V         |         |         |
 8+35      1.4816      2.42  |  Q      V         |         |         |
 8+40      1.4983      2.42  |  Q      V         |         |         |
 8+45      1.5150      2.43  |  Q      V         |         |         |
 8+50      1.5318      2.44  |  Q       |V       |         |         |
 8+55      1.5486      2.45  |  Q       |V       |         |         |
 9+ 0      1.5655      2.45  |  Q       |V       |         |         |
 9+ 5      1.5825      2.46  |  Q       |V       |         |         |
 9+10      1.5995      2.47  |  Q       |V       |         |         |
 9+15      1.6166      2.48  |  Q       |V       |         |         |
 9+20      1.6338      2.49  |  Q       |V       |         |         |
 9+25      1.6510      2.50  |  Q       |V       |         |         |
 9+30      1.6682      2.51  |  Q       | V      |         |         |
 9+35      1.6855      2.52  |  Q       | V      |         |         |
 9+40      1.7029      2.52  |  Q       | V      |         |         |
 9+45      1.7204      2.53  |  Q       | V      |         |         |
 9+50      1.7379      2.54  |  Q       | V      |         |         |
 9+55      1.7555      2.55  |  Q       | V      |         |         |
10+ 0      1.7731      2.56  |  Q       | V      |         |         |
10+ 5      1.7909      2.57  |  Q       | V      |         |         |
10+10      1.8087      2.58  |  Q       |  V     |         |         |
10+15      1.8265      2.59  |  Q       |  V     |         |         |
10+20      1.8445      2.60  |  Q       |  V     |         |         |
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10+25       1.8625      2.62  |  Q       |  V       |          |          |
10+30       1.8805      2.63  |  Q       |  V       |          |          |
10+35       1.8987      2.64  |  Q       |  V       |          |          |
10+40       1.9169      2.65  |  Q       |  V       |          |          |
10+45       1.9353      2.66  |  Q       |   V      |          |          |
10+50       1.9537      2.67  |  Q       |   V      |          |          |
10+55       1.9721      2.68  |  Q       |   V      |          |          |
11+ 0       1.9907      2.70  |  Q       |   V      |          |          |
11+ 5       2.0094      2.71  |  Q       |   V      |          |          |
11+10       2.0281      2.72  |  Q       |   V      |          |          |
11+15       2.0469      2.73  |  Q       |   V      |          |          |
11+20       2.0659      2.75  |  Q       |   V      |          |          |
11+25       2.0849      2.76  |  Q       |    V     |          |          |
11+30       2.1040      2.77  |  Q       |    V     |          |          |
11+35       2.1232      2.79  |  Q       |    V     |          |          |
11+40       2.1425      2.80  |  Q       |    V     |          |          |
11+45       2.1619      2.82  |  Q       |    V     |          |          |
11+50       2.1814      2.83  |  Q       |    V     |          |          |
11+55       2.2011      2.85  |  Q       |    V     |          |          |
12+ 0       2.2208      2.87  |  Q       |     V    |          |          |
12+ 5       2.2406      2.87  |  Q       |     V    |          |          |
12+10       2.2600      2.82  |  Q       |     V    |          |          |
12+15       2.2785      2.69  |  Q       |     V    |          |          |
12+20       2.2967      2.65  |  Q       |     V    |          |          |
12+25       2.3149      2.63  |  Q       |     V    |          |          |
12+30       2.3330      2.63  |  Q       |     V    |          |          |
12+35       2.3511      2.64  |  Q       |      V   |          |          |
12+40       2.3694      2.65  |  Q       |      V   |          |          |
12+45       2.3877      2.67  |  Q       |      V   |          |          |
12+50       2.4062      2.69  |  Q       |      V   |          |          |
12+55       2.4249      2.71  |  Q       |      V   |          |          |
13+ 0       2.4437      2.74  |  Q       |      V   |          |          |
13+ 5       2.4628      2.76  |  Q       |      V   |          |          |
13+10       2.4820      2.79  |  Q       |      V   |          |          |
13+15       2.5014      2.82  |  Q       |       V  |          |          |
13+20       2.5210      2.85  |  Q       |       V  |          |          |
13+25       2.5408      2.88  |  Q       |       V  |          |          |
13+30       2.5609      2.91  |  Q       |       V  |          |          |
13+35       2.5812      2.95  |  Q       |       V  |          |          |
13+40       2.6017      2.98  |  Q       |       V  |          |          |
13+45       2.6225      3.02  |   Q      |       V  |          |          |
13+50       2.6436      3.06  |   Q      |        V |          |          |
13+55       2.6649      3.10  |   Q      |        V |          |          |
14+ 0       2.6866      3.14  |   Q      |        V |          |          |
14+ 5       2.7085      3.19  |   Q      |        V |          |          |
14+10       2.7308      3.24  |   Q      |        V |          |          |
14+15       2.7535      3.29  |   Q      |        V |          |          |
14+20       2.7764      3.34  |   Q      |         V|          |          |
14+25       2.7999      3.40  |   Q      |         V|          |          |
14+30       2.8237      3.46  |   Q      |         V|          |          |
14+35       2.8479      3.52  |   Q      |         V|          |          |
14+40       2.8727      3.59  |   Q      |         V|          |          |
14+45       2.8979      3.67  |   Q      |         V|          |          |
14+50       2.9237      3.74  |   Q      |          |V         |          |
14+55       2.9501      3.83  |    Q     |          |V         |          |
15+ 0       2.9771      3.92  |    Q     |          |V         |          |
15+ 5       3.0049      4.03  |    Q     |          |V         |          |
15+10       3.0334      4.14  |    Q     |          |V         |          |
15+15       3.0629      4.27  |    Q     |          | V        |          |
15+20       3.0932      4.41  |    Q     |          | V        |          |
15+25       3.1241      4.48  |    Q     |          | V        |          |
15+30       3.1532      4.23  |    Q     |          | V        |          |
15+35       3.1770      3.46  |   Q      |          |  V       |          |
15+40       3.1996      3.27  |   Q      |          |  V       |          |
15+45       3.2227      3.36  |   Q      |          |  V       |          |
15+50       3.2476      3.60  |   Q      |          |  V       |          |
15+55       3.2761      4.14  |    Q     |          |  V       |          |
16+ 0       3.3111      5.09  |     Q    |          |  V       |          |
16+ 5       3.3696      8.49  |          |Q         |   V      |          |
16+10       3.4768     15.57  |          |          Q    V     |          |
16+15       3.6484     24.92  |          |          |     V    |  Q       |
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16+20       3.7434     13.80  |          |        Q |       V  |          |
16+25       3.8064      9.15  |          |  Q       |       V  |          |
16+30       3.8563      7.25  |          Q|          |       V  |          |
16+35       3.9023      6.67  |        Q  |          |        V |          |
16+40       3.9428      5.89  |      Q    |          |        V |          |
16+45       3.9785      5.17  |     Q     |          |        V |          |
16+50       4.0097      4.53  |     Q     |          |         V|          |
16+55       4.0389      4.25  |    Q      |          |         V|          |
17+ 0       4.0666      4.02  |    Q      |          |         V|          |
17+ 5       4.0933      3.87  |    Q      |          |         V|          |
17+10       4.1188      3.69  |   Q       |          |         V|          |
17+15       4.1429      3.50  |   Q       |          |          V          |
17+20       4.1659      3.34  |   Q       |          |          V          |
17+25       4.1880      3.21  |   Q       |          |          V          |
17+30       4.2095      3.12  |   Q       |          |          V          |
17+35       4.2304      3.04  |   Q       |          |          V          |
17+40       4.2509      2.97  |  Q        |          |          V          |
17+45       4.2708      2.90  |  Q        |          |          V          |
17+50       4.2903      2.83  |  Q        |          |          |V         |
17+55       4.3094      2.77  |  Q        |          |          |V         |
18+ 0       4.3281      2.72  |  Q        |          |          |V         |
18+ 5       4.3466      2.68  |  Q        |          |          |V         |
18+10       4.3652      2.70  |  Q        |          |          |V         |
18+15       4.3845      2.80  |  Q        |          |          |V         |
18+20       4.4039      2.83  |  Q        |          |          |V         |
18+25       4.4234      2.83  |  Q        |          |          | V        |
18+30       4.4428      2.82  |  Q        |          |          | V        |
18+35       4.4621      2.80  |  Q        |          |          | V        |
18+40       4.4812      2.78  |  Q        |          |          | V        |
18+45       4.5002      2.76  |  Q        |          |          | V        |
18+50       4.5190      2.73  |  Q        |          |          | V        |
18+55       4.5377      2.71  |  Q        |          |          | V        |
19+ 0       4.5561      2.68  |  Q        |          |          | V        |
19+ 5       4.5745      2.66  |  Q        |          |          |  V       |
19+10       4.5927      2.64  |  Q        |          |          |  V       |
19+15       4.6107      2.62  |  Q        |          |          |  V       |
19+20       4.6286      2.60  |  Q        |          |          |  V       |
19+25       4.6463      2.58  |  Q        |          |          |  V       |
19+30       4.6639      2.56  |  Q        |          |          |  V       |
19+35       4.6814      2.54  |  Q        |          |          |  V       |
19+40       4.6987      2.52  |  Q        |          |          |   V      |
19+45       4.7159      2.50  |  Q        |          |          |   V      |
19+50       4.7330      2.48  |  Q        |          |          |   V      |
19+55       4.7500      2.47  |  Q        |          |          |   V      |
20+ 0       4.7669      2.45  |  Q        |          |          |   V      |
20+ 5       4.7836      2.43  |  Q        |          |          |   V      |
20+10       4.8003      2.42  |  Q        |          |          |   V      |
20+15       4.8168      2.40  |  Q        |          |          |   V      |
20+20       4.8333      2.39  |  Q        |          |          |    V     |
20+25       4.8496      2.37  |  Q        |          |          |    V     |
20+30       4.8659      2.36  |  Q        |          |          |    V     |
20+35       4.8820      2.35  |  Q        |          |          |    V     |
20+40       4.8981      2.33  |  Q        |          |          |    V     |
20+45       4.9140      2.32  |  Q        |          |          |    V     |
20+50       4.9299      2.31  |  Q        |          |          |    V     |
20+55       4.9457      2.29  |  Q        |          |          |    V     |
21+ 0       4.9615      2.28  |  Q        |          |          |    V     |
21+ 5       4.9771      2.27  |  Q        |          |          |     V    |
21+10       4.9927      2.26  |  Q        |          |          |     V    |
21+15       5.0081      2.25  | Q         |          |          |     V    |
21+20       5.0235      2.24  | Q         |          |          |     V    |
21+25       5.0389      2.23  | Q         |          |          |     V    |
21+30       5.0541      2.22  | Q         |          |          |     V    |
21+35       5.0693      2.21  | Q         |          |          |     V    |
21+40       5.0844      2.20  | Q         |          |          |     V    |
21+45       5.0995      2.19  | Q         |          |          |     V    |
21+50       5.1145      2.18  | Q         |          |          |      V   |
21+55       5.1294      2.17  | Q         |          |          |      V   |
22+ 0       5.1443      2.16  | Q         |          |          |      V   |
22+ 5       5.1591      2.15  | Q         |          |          |      V   |
22+10       5.1738      2.14  | Q         |          |          |      V   |
```

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  22+15       5.1885      2.13  | Q       |         |         |      V  |
  22+20       5.2031      2.12  | Q       |         |         |      V  |
  22+25       5.2176      2.11  | Q       |         |         |      V  |
  22+30       5.2321      2.10  | Q       |         |         |      V  |
  22+35       5.2465      2.10  | Q       |         |         |      V  |
  22+40       5.2609      2.09  | Q       |         |         |       V |
  22+45       5.2752      2.08  | Q       |         |         |       V |
  22+50       5.2895      2.07  | Q       |         |         |       V |
  22+55       5.3037      2.06  | Q       |         |         |       V |
  23+ 0       5.3179      2.06  | Q       |         |         |       V |
  23+ 5       5.3320      2.05  | Q       |         |         |       V |
  23+10       5.3461      2.04  | Q       |         |         |       V |
  23+15       5.3601      2.04  | Q       |         |         |       V |
  23+20       5.3741      2.03  | Q       |         |         |       V |
  23+25       5.3880      2.02  | Q       |         |         |        V|
  23+30       5.4019      2.01  | Q       |         |         |        V|
  23+35       5.4157      2.01  | Q       |         |         |        V|
  23+40       5.4295      2.00  | Q       |         |         |        V|
  23+45       5.4432      1.99  | Q       |         |         |        V|
  23+50       5.4569      1.99  | Q       |         |         |        V|
  23+55       5.4705      1.98  | Q       |         |         |        V|
  24+ 0       5.4841      1.97  | Q       |         |         |        V|
  24+ 5       5.4972      1.89  | Q       |         |         |        V|
  24+10       5.5080      1.57  | Q       |         |         |        V|
  24+15       5.5137      0.82  |Q        |         |         |        V|
  24+20       5.5171      0.50  Q         |         |         |        V|
  24+25       5.5193      0.32  Q         |         |         |        V|
  24+30       5.5208      0.21  Q         |         |         |        V|
  24+35       5.5217      0.13  Q         |         |         |        V|
  24+40       5.5222      0.08  Q         |         |         |        V|
  24+45       5.5225      0.05  Q         |         |         |        V|
  24+50       5.5228      0.03  Q         |         |         |        V|
  24+55       5.5229      0.02  Q         |         |         |        V|
  25+ 0       5.5230      0.02  Q         |         |         |        V|
  25+ 5       5.5231      0.01  Q         |         |         |        V|
  25+10       5.5231      0.00  Q         |         |         |        V|
  25+15       5.5231      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

Area 'D' – 2 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'D'
2 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 2

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             9.52            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             9.52            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             9.52           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             9.52            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             9.52            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             9.52           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 68.7      49.4          9.52      1.000     0.816    1.000    0.816

Area-averaged adjusted loss rate Fm (In/Hr) =  0.816

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
9.52	1.000	68.7	49.4	10.23	0.078

Area-averaged catchment yield fraction, Y = 0.078
Area-averaged low loss fraction, Yb = 0.922
User entry of time of concentration = 0.262 (hours)
++
Watershed area = 9.52(Ac.)
Catchment Lag time = 0.210 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 39.7583
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.816(In/Hr)
Average low loss rate fraction (Yb) = 0.922 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 9.52(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.309(In)
30-minute factor = 1.000 Adjusted rainfall = 0.528(In)
1-hour factor = 1.000 Adjusted rainfall = 0.650(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 115.13 (CFS))	
1	3.107	3.578
2	14.718	13.368
3	45.653	35.616
4	68.346	26.128
5	78.353	11.521
6	85.032	7.690
7	89.767	5.452
8	93.189	3.940
9	95.606	2.782
10	97.231	1.872
11	98.108	1.010
12	98.568	0.529
13	98.955	0.446
14	99.222	0.306
15	99.512	0.334
16	99.764	0.291
17	99.907	0.164
18	100.000	0.107

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3085	0.3085
2	0.3799	0.0713
3	0.4290	0.0491
4	0.4677	0.0387
5	0.5000	0.0324
6	0.5281	0.0281
7	0.5531	0.0250
8	0.5758	0.0226

9	0.5965	0.0207
10	0.6156	0.0192
11	0.6335	0.0179
12	0.6502	0.0168
13	0.6837	0.0335
14	0.7162	0.0325
15	0.7479	0.0317
16	0.7788	0.0309
17	0.8090	0.0302
18	0.8385	0.0295
19	0.8674	0.0289
20	0.8958	0.0284
21	0.9236	0.0278
22	0.9510	0.0273
23	0.9779	0.0269
24	1.0043	0.0265
25	1.0304	0.0260
26	1.0560	0.0257
27	1.0813	0.0253
28	1.1063	0.0249
29	1.1309	0.0246
30	1.1552	0.0243
31	1.1792	0.0240
32	1.2029	0.0237
33	1.2263	0.0234
34	1.2495	0.0232
35	1.2724	0.0229
36	1.2951	0.0227
37	1.3176	0.0224
38	1.3398	0.0222
39	1.3618	0.0220
40	1.3835	0.0218
41	1.4051	0.0216
42	1.4265	0.0214
43	1.4477	0.0212
44	1.4687	0.0210
45	1.4896	0.0208
46	1.5102	0.0207
47	1.5307	0.0205
48	1.5511	0.0203
49	1.5712	0.0202
50	1.5913	0.0200
51	1.6111	0.0199
52	1.6309	0.0197
53	1.6505	0.0196
54	1.6699	0.0195
55	1.6892	0.0193
56	1.7084	0.0192
57	1.7275	0.0191
58	1.7464	0.0189
59	1.7652	0.0188
60	1.7839	0.0187
61	1.8025	0.0186
62	1.8210	0.0185
63	1.8393	0.0184
64	1.8576	0.0182
65	1.8757	0.0181
66	1.8938	0.0180
67	1.9117	0.0179
68	1.9295	0.0178
69	1.9473	0.0177
70	1.9649	0.0176
71	1.9825	0.0176
72	1.9999	0.0175
73	2.0138	0.0138
74	2.0275	0.0137
75	2.0412	0.0137
76	2.0547	0.0136
77	2.0682	0.0135
78	2.0816	0.0134
79	2.0949	0.0133

80	2.1081	0.0132
81	2.1213	0.0131
82	2.1343	0.0131
83	2.1473	0.0130
84	2.1602	0.0129
85	2.1730	0.0128
86	2.1858	0.0127
87	2.1984	0.0127
88	2.2110	0.0126
89	2.2236	0.0125
90	2.2360	0.0125
91	2.2484	0.0124
92	2.2607	0.0123
93	2.2730	0.0123
94	2.2852	0.0122
95	2.2973	0.0121
96	2.3093	0.0121
97	2.3213	0.0120
98	2.3333	0.0119
99	2.3451	0.0119
100	2.3570	0.0118
101	2.3687	0.0118
102	2.3804	0.0117
103	2.3921	0.0116
104	2.4036	0.0116
105	2.4152	0.0115
106	2.4266	0.0115
107	2.4381	0.0114
108	2.4494	0.0114
109	2.4607	0.0113
110	2.4720	0.0113
111	2.4832	0.0112
112	2.4944	0.0112
113	2.5055	0.0111
114	2.5166	0.0111
115	2.5276	0.0110
116	2.5385	0.0110
117	2.5494	0.0109
118	2.5603	0.0109
119	2.5711	0.0108
120	2.5819	0.0108
121	2.5927	0.0107
122	2.6034	0.0107
123	2.6140	0.0106
124	2.6246	0.0106
125	2.6352	0.0106
126	2.6457	0.0105
127	2.6562	0.0105
128	2.6666	0.0104
129	2.6770	0.0104
130	2.6874	0.0104
131	2.6977	0.0103
132	2.7080	0.0103
133	2.7182	0.0102
134	2.7284	0.0102
135	2.7386	0.0102
136	2.7487	0.0101
137	2.7588	0.0101
138	2.7688	0.0101
139	2.7788	0.0100
140	2.7888	0.0100
141	2.7988	0.0099
142	2.8087	0.0099
143	2.8185	0.0099
144	2.8284	0.0098
145	2.8382	0.0098
146	2.8479	0.0098
147	2.8577	0.0097
148	2.8674	0.0097
149	2.8771	0.0097
150	2.8867	0.0096

151	2.8963	0.0096
152	2.9059	0.0096
153	2.9154	0.0095
154	2.9249	0.0095
155	2.9344	0.0095
156	2.9439	0.0095
157	2.9533	0.0094
158	2.9627	0.0094
159	2.9720	0.0094
160	2.9814	0.0093
161	2.9907	0.0093
162	2.9999	0.0093
163	3.0092	0.0092
164	3.0184	0.0092
165	3.0276	0.0092
166	3.0368	0.0092
167	3.0459	0.0091
168	3.0550	0.0091
169	3.0641	0.0091
170	3.0731	0.0091
171	3.0821	0.0090
172	3.0911	0.0090
173	3.1001	0.0090
174	3.1091	0.0089
175	3.1180	0.0089
176	3.1269	0.0089
177	3.1358	0.0089
178	3.1446	0.0088
179	3.1534	0.0088
180	3.1622	0.0088
181	3.1710	0.0088
182	3.1797	0.0087
183	3.1885	0.0087
184	3.1972	0.0087
185	3.2058	0.0087
186	3.2145	0.0087
187	3.2231	0.0086
188	3.2317	0.0086
189	3.2403	0.0086
190	3.2489	0.0086
191	3.2574	0.0085
192	3.2659	0.0085
193	3.2744	0.0085
194	3.2829	0.0085
195	3.2913	0.0085
196	3.2998	0.0084
197	3.3082	0.0084
198	3.3166	0.0084
199	3.3249	0.0084
200	3.3333	0.0083
201	3.3416	0.0083
202	3.3499	0.0083
203	3.3582	0.0083
204	3.3664	0.0083
205	3.3747	0.0082
206	3.3829	0.0082
207	3.3911	0.0082
208	3.3993	0.0082
209	3.4075	0.0082
210	3.4156	0.0081
211	3.4237	0.0081
212	3.4318	0.0081
213	3.4399	0.0081
214	3.4480	0.0081
215	3.4560	0.0080
216	3.4640	0.0080
217	3.4721	0.0080
218	3.4800	0.0080
219	3.4880	0.0080
220	3.4960	0.0080
221	3.5039	0.0079

222	3.5118	0.0079
223	3.5197	0.0079
224	3.5276	0.0079
225	3.5355	0.0079
226	3.5433	0.0078
227	3.5512	0.0078
228	3.5590	0.0078
229	3.5668	0.0078
230	3.5745	0.0078
231	3.5823	0.0078
232	3.5901	0.0077
233	3.5978	0.0077
234	3.6055	0.0077
235	3.6132	0.0077
236	3.6209	0.0077
237	3.6285	0.0077
238	3.6362	0.0076
239	3.6438	0.0076
240	3.6514	0.0076
241	3.6590	0.0076
242	3.6666	0.0076
243	3.6742	0.0076
244	3.6817	0.0076
245	3.6893	0.0075
246	3.6968	0.0075
247	3.7043	0.0075
248	3.7118	0.0075
249	3.7193	0.0075
250	3.7267	0.0075
251	3.7342	0.0074
252	3.7416	0.0074
253	3.7490	0.0074
254	3.7564	0.0074
255	3.7638	0.0074
256	3.7712	0.0074
257	3.7785	0.0074
258	3.7859	0.0073
259	3.7932	0.0073
260	3.8005	0.0073
261	3.8078	0.0073
262	3.8151	0.0073
263	3.8224	0.0073
264	3.8297	0.0073
265	3.8369	0.0072
266	3.8441	0.0072
267	3.8514	0.0072
268	3.8586	0.0072
269	3.8658	0.0072
270	3.8729	0.0072
271	3.8801	0.0072
272	3.8873	0.0072
273	3.8944	0.0071
274	3.9015	0.0071
275	3.9086	0.0071
276	3.9157	0.0071
277	3.9228	0.0071
278	3.9299	0.0071
279	3.9370	0.0071
280	3.9440	0.0070
281	3.9510	0.0070
282	3.9581	0.0070
283	3.9651	0.0070
284	3.9721	0.0070
285	3.9791	0.0070
286	3.9860	0.0070
287	3.9930	0.0070
288	4.0000	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)

1	0.0070	0.0064	0.0005
2	0.0070	0.0064	0.0005
3	0.0070	0.0064	0.0005
4	0.0070	0.0065	0.0005
5	0.0070	0.0065	0.0006
6	0.0070	0.0065	0.0006
7	0.0071	0.0065	0.0006
8	0.0071	0.0065	0.0006
9	0.0071	0.0065	0.0006
10	0.0071	0.0066	0.0006
11	0.0071	0.0066	0.0006
12	0.0072	0.0066	0.0006
13	0.0072	0.0066	0.0006
14	0.0072	0.0066	0.0006
15	0.0072	0.0067	0.0006
16	0.0072	0.0067	0.0006
17	0.0073	0.0067	0.0006
18	0.0073	0.0067	0.0006
19	0.0073	0.0067	0.0006
20	0.0073	0.0067	0.0006
21	0.0073	0.0068	0.0006
22	0.0074	0.0068	0.0006
23	0.0074	0.0068	0.0006
24	0.0074	0.0068	0.0006
25	0.0074	0.0068	0.0006
26	0.0074	0.0069	0.0006
27	0.0075	0.0069	0.0006
28	0.0075	0.0069	0.0006
29	0.0075	0.0069	0.0006
30	0.0075	0.0069	0.0006
31	0.0076	0.0070	0.0006
32	0.0076	0.0070	0.0006
33	0.0076	0.0070	0.0006
34	0.0076	0.0070	0.0006
35	0.0077	0.0071	0.0006
36	0.0077	0.0071	0.0006
37	0.0077	0.0071	0.0006
38	0.0077	0.0071	0.0006
39	0.0078	0.0072	0.0006
40	0.0078	0.0072	0.0006
41	0.0078	0.0072	0.0006
42	0.0078	0.0072	0.0006
43	0.0079	0.0072	0.0006
44	0.0079	0.0073	0.0006
45	0.0079	0.0073	0.0006
46	0.0079	0.0073	0.0006
47	0.0080	0.0073	0.0006
48	0.0080	0.0074	0.0006
49	0.0080	0.0074	0.0006
50	0.0080	0.0074	0.0006
51	0.0081	0.0075	0.0006
52	0.0081	0.0075	0.0006
53	0.0081	0.0075	0.0006
54	0.0082	0.0075	0.0006
55	0.0082	0.0076	0.0006
56	0.0082	0.0076	0.0006
57	0.0083	0.0076	0.0006
58	0.0083	0.0076	0.0006
59	0.0083	0.0077	0.0007
60	0.0083	0.0077	0.0007
61	0.0084	0.0077	0.0007
62	0.0084	0.0077	0.0007
63	0.0085	0.0078	0.0007
64	0.0085	0.0078	0.0007
65	0.0085	0.0078	0.0007
66	0.0085	0.0079	0.0007
67	0.0086	0.0079	0.0007
68	0.0086	0.0079	0.0007
69	0.0087	0.0080	0.0007
70	0.0087	0.0080	0.0007

71	0.0087	0.0080	0.0007
72	0.0087	0.0081	0.0007
73	0.0088	0.0081	0.0007
74	0.0088	0.0081	0.0007
75	0.0089	0.0082	0.0007
76	0.0089	0.0082	0.0007
77	0.0089	0.0082	0.0007
78	0.0090	0.0083	0.0007
79	0.0090	0.0083	0.0007
80	0.0091	0.0083	0.0007
81	0.0091	0.0084	0.0007
82	0.0091	0.0084	0.0007
83	0.0092	0.0085	0.0007
84	0.0092	0.0085	0.0007
85	0.0093	0.0085	0.0007
86	0.0093	0.0086	0.0007
87	0.0094	0.0086	0.0007
88	0.0094	0.0087	0.0007
89	0.0095	0.0087	0.0007
90	0.0095	0.0087	0.0007
91	0.0095	0.0088	0.0007
92	0.0096	0.0088	0.0008
93	0.0096	0.0089	0.0008
94	0.0097	0.0089	0.0008
95	0.0097	0.0090	0.0008
96	0.0098	0.0090	0.0008
97	0.0098	0.0091	0.0008
98	0.0099	0.0091	0.0008
99	0.0099	0.0092	0.0008
100	0.0100	0.0092	0.0008
101	0.0101	0.0093	0.0008
102	0.0101	0.0093	0.0008
103	0.0102	0.0094	0.0008
104	0.0102	0.0094	0.0008
105	0.0103	0.0095	0.0008
106	0.0103	0.0095	0.0008
107	0.0104	0.0096	0.0008
108	0.0104	0.0096	0.0008
109	0.0105	0.0097	0.0008
110	0.0106	0.0097	0.0008
111	0.0106	0.0098	0.0008
112	0.0107	0.0099	0.0008
113	0.0108	0.0099	0.0008
114	0.0108	0.0100	0.0008
115	0.0109	0.0101	0.0009
116	0.0110	0.0101	0.0009
117	0.0111	0.0102	0.0009
118	0.0111	0.0102	0.0009
119	0.0112	0.0103	0.0009
120	0.0113	0.0104	0.0009
121	0.0114	0.0105	0.0009
122	0.0114	0.0105	0.0009
123	0.0115	0.0106	0.0009
124	0.0116	0.0107	0.0009
125	0.0117	0.0108	0.0009
126	0.0118	0.0108	0.0009
127	0.0119	0.0109	0.0009
128	0.0119	0.0110	0.0009
129	0.0121	0.0111	0.0009
130	0.0121	0.0112	0.0010
131	0.0123	0.0113	0.0010
132	0.0123	0.0114	0.0010
133	0.0125	0.0115	0.0010
134	0.0125	0.0115	0.0010
135	0.0127	0.0117	0.0010
136	0.0127	0.0117	0.0010
137	0.0129	0.0119	0.0010
138	0.0130	0.0120	0.0010
139	0.0131	0.0121	0.0010
140	0.0132	0.0122	0.0010
141	0.0134	0.0123	0.0010

142	0.0135	0.0124	0.0011
143	0.0137	0.0126	0.0011
144	0.0137	0.0127	0.0011
145	0.0175	0.0161	0.0014
146	0.0176	0.0162	0.0014
147	0.0177	0.0163	0.0014
148	0.0178	0.0164	0.0014
149	0.0180	0.0166	0.0014
150	0.0181	0.0167	0.0014
151	0.0184	0.0169	0.0014
152	0.0185	0.0170	0.0014
153	0.0187	0.0172	0.0015
154	0.0188	0.0173	0.0015
155	0.0191	0.0176	0.0015
156	0.0192	0.0177	0.0015
157	0.0195	0.0179	0.0015
158	0.0196	0.0181	0.0015
159	0.0199	0.0183	0.0016
160	0.0200	0.0185	0.0016
161	0.0203	0.0187	0.0016
162	0.0205	0.0189	0.0016
163	0.0208	0.0192	0.0016
164	0.0210	0.0194	0.0016
165	0.0214	0.0197	0.0017
166	0.0216	0.0199	0.0017
167	0.0220	0.0203	0.0017
168	0.0222	0.0205	0.0017
169	0.0227	0.0209	0.0018
170	0.0229	0.0211	0.0018
171	0.0234	0.0216	0.0018
172	0.0237	0.0219	0.0019
173	0.0243	0.0224	0.0019
174	0.0246	0.0227	0.0019
175	0.0253	0.0233	0.0020
176	0.0257	0.0236	0.0020
177	0.0265	0.0244	0.0021
178	0.0269	0.0248	0.0021
179	0.0278	0.0257	0.0022
180	0.0284	0.0261	0.0022
181	0.0295	0.0272	0.0023
182	0.0302	0.0278	0.0024
183	0.0317	0.0292	0.0025
184	0.0325	0.0300	0.0026
185	0.0168	0.0154	0.0013
186	0.0179	0.0165	0.0014
187	0.0207	0.0191	0.0016
188	0.0226	0.0208	0.0018
189	0.0281	0.0259	0.0022
190	0.0324	0.0298	0.0025
191	0.0491	0.0453	0.0039
192	0.0713	0.0657	0.0056
193	0.3085	0.0680	0.2405
194	0.0387	0.0356	0.0030
195	0.0250	0.0230	0.0020
196	0.0192	0.0177	0.0015
197	0.0335	0.0309	0.0026
198	0.0309	0.0285	0.0024
199	0.0289	0.0267	0.0023
200	0.0273	0.0252	0.0021
201	0.0260	0.0240	0.0020
202	0.0249	0.0230	0.0020
203	0.0240	0.0221	0.0019
204	0.0232	0.0214	0.0018
205	0.0224	0.0207	0.0018
206	0.0218	0.0201	0.0017
207	0.0212	0.0195	0.0017
208	0.0207	0.0190	0.0016
209	0.0202	0.0186	0.0016
210	0.0197	0.0182	0.0015
211	0.0193	0.0178	0.0015
212	0.0189	0.0175	0.0015

213	0.0186	0.0171	0.0015
214	0.0182	0.0168	0.0014
215	0.0179	0.0165	0.0014
216	0.0176	0.0163	0.0014
217	0.0138	0.0128	0.0011
218	0.0136	0.0125	0.0011
219	0.0133	0.0123	0.0010
220	0.0131	0.0120	0.0010
221	0.0128	0.0118	0.0010
222	0.0126	0.0116	0.0010
223	0.0124	0.0114	0.0010
224	0.0122	0.0112	0.0010
225	0.0120	0.0111	0.0009
226	0.0118	0.0109	0.0009
227	0.0116	0.0107	0.0009
228	0.0115	0.0106	0.0009
229	0.0113	0.0104	0.0009
230	0.0112	0.0103	0.0009
231	0.0110	0.0102	0.0009
232	0.0109	0.0100	0.0009
233	0.0107	0.0099	0.0008
234	0.0106	0.0098	0.0008
235	0.0105	0.0097	0.0008
236	0.0104	0.0095	0.0008
237	0.0102	0.0094	0.0008
238	0.0101	0.0093	0.0008
239	0.0100	0.0092	0.0008
240	0.0099	0.0091	0.0008
241	0.0098	0.0090	0.0008
242	0.0097	0.0089	0.0008
243	0.0096	0.0089	0.0008
244	0.0095	0.0088	0.0007
245	0.0094	0.0087	0.0007
246	0.0093	0.0086	0.0007
247	0.0092	0.0085	0.0007
248	0.0092	0.0084	0.0007
249	0.0091	0.0084	0.0007
250	0.0090	0.0083	0.0007
251	0.0089	0.0082	0.0007
252	0.0088	0.0082	0.0007
253	0.0088	0.0081	0.0007
254	0.0087	0.0080	0.0007
255	0.0086	0.0080	0.0007
256	0.0086	0.0079	0.0007
257	0.0085	0.0078	0.0007
258	0.0084	0.0078	0.0007
259	0.0084	0.0077	0.0007
260	0.0083	0.0077	0.0007
261	0.0082	0.0076	0.0006
262	0.0082	0.0075	0.0006
263	0.0081	0.0075	0.0006
264	0.0081	0.0074	0.0006
265	0.0080	0.0074	0.0006
266	0.0080	0.0073	0.0006
267	0.0079	0.0073	0.0006
268	0.0078	0.0072	0.0006
269	0.0078	0.0072	0.0006
270	0.0077	0.0071	0.0006
271	0.0077	0.0071	0.0006
272	0.0076	0.0070	0.0006
273	0.0076	0.0070	0.0006
274	0.0076	0.0070	0.0006
275	0.0075	0.0069	0.0006
276	0.0075	0.0069	0.0006
277	0.0074	0.0068	0.0006
278	0.0074	0.0068	0.0006
279	0.0073	0.0068	0.0006
280	0.0073	0.0067	0.0006
281	0.0072	0.0067	0.0006
282	0.0072	0.0066	0.0006
283	0.0072	0.0066	0.0006

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      284              0.0071           0.0066              0.0006
      285              0.0071           0.0065              0.0006
      286              0.0070           0.0065              0.0006
      287              0.0070           0.0065              0.0005
      288              0.0070           0.0064              0.0005
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      3.47(In)
      Total effective rainfall =      0.53(In)
      Peak flow rate in flood hydrograph =      8.86(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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      0.00  Q         |         |         |         |
   0+10       0.0001      0.01  Q         |         |         |         |
   0+15       0.0003      0.03  Q         |         |         |         |
   0+20       0.0006      0.04  Q         |         |         |         |
   0+25       0.0009      0.05  Q         |         |         |         |
   0+30       0.0013      0.05  Q         |         |         |         |
   0+35       0.0017      0.06  Q         |         |         |         |
   0+40       0.0021      0.06  Q         |         |         |         |
   0+45       0.0025      0.06  Q         |         |         |         |
   0+50       0.0029      0.06  Q         |         |         |         |
   0+55       0.0034      0.06  Q         |         |         |         |
   1+ 0       0.0038      0.06  Q         |         |         |         |
   1+ 5       0.0042      0.06  Q         |         |         |         |
   1+10       0.0047      0.06  Q         |         |         |         |
   1+15       0.0051      0.06  Q         |         |         |         |
   1+20       0.0056      0.06  Q         |         |         |         |
   1+25       0.0060      0.06  Q         |         |         |         |
   1+30       0.0064      0.07  Q         |         |         |         |
   1+35       0.0069      0.07  Q         |         |         |         |
   1+40       0.0073      0.07  Q         |         |         |         |
   1+45       0.0078      0.07  Q         |         |         |         |
   1+50       0.0083      0.07  Q         |         |         |         |
   1+55       0.0087      0.07  Q         |         |         |         |
   2+ 0       0.0092      0.07  Q         |         |         |         |
   2+ 5       0.0096      0.07  Q         |         |         |         |
   2+10       0.0101      0.07  Q         |         |         |         |
   2+15       0.0105      0.07  QV        |         |         |         |
   2+20       0.0110      0.07  QV        |         |         |         |
   2+25       0.0115      0.07  QV        |         |         |         |
   2+30       0.0119      0.07  QV        |         |         |         |
   2+35       0.0124      0.07  QV        |         |         |         |
   2+40       0.0129      0.07  QV        |         |         |         |
   2+45       0.0133      0.07  QV        |         |         |         |
   2+50       0.0138      0.07  QV        |         |         |         |
   2+55       0.0143      0.07  QV        |         |         |         |
   3+ 0       0.0147      0.07  QV        |         |         |         |
   3+ 5       0.0152      0.07  QV        |         |         |         |
   3+10       0.0157      0.07  QV        |         |         |         |
   3+15       0.0162      0.07  QV        |         |         |         |
   3+20       0.0167      0.07  QV        |         |         |         |
   3+25       0.0171      0.07  QV        |         |         |         |
   3+30       0.0176      0.07  QV        |         |         |         |
   3+35       0.0181      0.07  QV        |         |         |         |
   3+40       0.0186      0.07  QV        |         |         |         |
   3+45       0.0191      0.07  QV        |         |         |         |
   3+50       0.0196      0.07  QV        |         |         |         |
   3+55       0.0200      0.07  QV        |         |         |         |
   4+ 0       0.0205      0.07  QV        |         |         |         |
   4+ 5       0.0210      0.07  Q V       |         |         |         |
   4+10       0.0215      0.07  Q V       |         |         |         |
   4+15       0.0220      0.07  Q V       |         |         |         |
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 4+20      0.0225      0.07  Q V       |          |          |          |
 4+25      0.0230      0.07  Q V       |          |          |          |
 4+30      0.0235      0.07  Q V       |          |          |          |
 4+35      0.0240      0.07  Q V       |          |          |          |
 4+40      0.0245      0.07  Q V       |          |          |          |
 4+45      0.0250      0.07  Q V       |          |          |          |
 4+50      0.0255      0.07  Q V       |          |          |          |
 4+55      0.0261      0.07  Q V       |          |          |          |
 5+ 0      0.0266      0.07  Q V       |          |          |          |
 5+ 5      0.0271      0.07  Q V       |          |          |          |
 5+10      0.0276      0.08  Q V       |          |          |          |
 5+15      0.0281      0.08  Q V       |          |          |          |
 5+20      0.0286      0.08  Q V       |          |          |          |
 5+25      0.0292      0.08  Q V       |          |          |          |
 5+30      0.0297      0.08  Q V       |          |          |          |
 5+35      0.0302      0.08  Q V       |          |          |          |
 5+40      0.0307      0.08  Q V       |          |          |          |
 5+45      0.0313      0.08  Q V       |          |          |          |
 5+50      0.0318      0.08  Q  V      |          |          |          |
 5+55      0.0323      0.08  Q  V      |          |          |          |
 6+ 0      0.0329      0.08  Q  V      |          |          |          |
 6+ 5      0.0334      0.08  Q  V      |          |          |          |
 6+10      0.0340      0.08  Q  V      |          |          |          |
 6+15      0.0345      0.08  Q  V      |          |          |          |
 6+20      0.0350      0.08  Q  V      |          |          |          |
 6+25      0.0356      0.08  Q  V      |          |          |          |
 6+30      0.0361      0.08  Q  V      |          |          |          |
 6+35      0.0367      0.08  Q  V      |          |          |          |
 6+40      0.0373      0.08  Q  V      |          |          |          |
 6+45      0.0378      0.08  Q  V      |          |          |          |
 6+50      0.0384      0.08  Q  V      |          |          |          |
 6+55      0.0389      0.08  Q  V      |          |          |          |
 7+ 0      0.0395      0.08  Q  V      |          |          |          |
 7+ 5      0.0401      0.08  Q  V      |          |          |          |
 7+10      0.0406      0.08  Q  V      |          |          |          |
 7+15      0.0412      0.08  Q  V      |          |          |          |
 7+20      0.0418      0.08  Q  V      |          |          |          |
 7+25      0.0424      0.08  Q   V     |          |          |          |
 7+30      0.0429      0.08  Q   V     |          |          |          |
 7+35      0.0435      0.08  Q   V     |          |          |          |
 7+40      0.0441      0.09  Q   V     |          |          |          |
 7+45      0.0447      0.09  Q   V     |          |          |          |
 7+50      0.0453      0.09  Q   V     |          |          |          |
 7+55      0.0459      0.09  Q   V     |          |          |          |
 8+ 0      0.0465      0.09  Q   V     |          |          |          |
 8+ 5      0.0471      0.09  Q   V     |          |          |          |
 8+10      0.0477      0.09  Q   V     |          |          |          |
 8+15      0.0483      0.09  Q   V     |          |          |          |
 8+20      0.0489      0.09  Q   V     |          |          |          |
 8+25      0.0495      0.09  Q   V     |          |          |          |
 8+30      0.0501      0.09  Q   V     |          |          |          |
 8+35      0.0508      0.09  Q   V     |          |          |          |
 8+40      0.0514      0.09  Q   V     |          |          |          |
 8+45      0.0520      0.09  Q   V     |          |          |          |
 8+50      0.0526      0.09  Q    V    |          |          |          |
 8+55      0.0533      0.09  Q    V    |          |          |          |
 9+ 0      0.0539      0.09  Q    V    |          |          |          |
 9+ 5      0.0546      0.09  Q    V    |          |          |          |
 9+10      0.0552      0.09  Q    V    |          |          |          |
 9+15      0.0558      0.09  Q    V    |          |          |          |
 9+20      0.0565      0.09  Q    V    |          |          |          |
 9+25      0.0572      0.10  Q    V    |          |          |          |
 9+30      0.0578      0.10  Q    V    |          |          |          |
 9+35      0.0585      0.10  Q    V    |          |          |          |
 9+40      0.0591      0.10  Q    V    |          |          |          |
 9+45      0.0598      0.10  Q    V    |          |          |          |
 9+50      0.0605      0.10  Q    V    |          |          |          |
 9+55      0.0612      0.10  Q    V    |          |          |          |
10+ 0      0.0619      0.10  Q    V    |          |          |          |
10+ 5      0.0626      0.10  Q    V    |          |          |          |
10+10      0.0632      0.10  Q     V   |          |          |          |
```

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10+15       0.0639      0.10  Q     V   |          |          |          |
10+20       0.0647      0.10  Q     V   |          |          |          |
10+25       0.0654      0.10  Q     V   |          |          |          |
10+30       0.0661      0.10  Q     V   |          |          |          |
10+35       0.0668      0.10  Q     V   |          |          |          |
10+40       0.0675      0.11  Q     V   |          |          |          |
10+45       0.0683      0.11  Q     V   |          |          |          |
10+50       0.0690      0.11  Q     V   |          |          |          |
10+55       0.0697      0.11  Q     V   |          |          |          |
11+ 0       0.0705      0.11  Q     V   |          |          |          |
11+ 5       0.0712      0.11  Q     V   |          |          |          |
11+10       0.0720      0.11  Q     V   |          |          |          |
11+15       0.0728      0.11  Q     V   |          |          |          |
11+20       0.0735      0.11  Q     V   |          |          |          |
11+25       0.0743      0.11  Q      V  |          |          |          |
11+30       0.0751      0.11  Q      V  |          |          |          |
11+35       0.0759      0.11  Q      V  |          |          |          |
11+40       0.0767      0.12  Q      V  |          |          |          |
11+45       0.0775      0.12  Q      V  |          |          |          |
11+50       0.0783      0.12  Q      V  |          |          |          |
11+55       0.0791      0.12  Q      V  |          |          |          |
12+ 0       0.0799      0.12  Q      V  |          |          |          |
12+ 5       0.0808      0.12  Q      V  |          |          |          |
12+10       0.0817      0.13  Q      V  |          |          |          |
12+15       0.0826      0.14  Q      V  |          |          |          |
12+20       0.0836      0.15  Q      V  |          |          |          |
12+25       0.0847      0.15  Q       V |          |          |          |
12+30       0.0857      0.15  Q       V |          |          |          |
12+35       0.0868      0.16  Q       V |          |          |          |
12+40       0.0879      0.16  Q       V |          |          |          |
12+45       0.0891      0.16  Q       V |          |          |          |
12+50       0.0902      0.16  Q       V |          |          |          |
12+55       0.0913      0.17  Q       V |          |          |          |
13+ 0       0.0925      0.17  Q       V |          |          |          |
13+ 5       0.0936      0.17  Q       V |          |          |          |
13+10       0.0948      0.17  Q        V|          |          |          |
13+15       0.0960      0.17  Q        V|          |          |          |
13+20       0.0972      0.17  Q        V|          |          |          |
13+25       0.0984      0.18  Q        V|          |          |          |
13+30       0.0997      0.18  Q        V|          |          |          |
13+35       0.1009      0.18  Q        V|          |          |          |
13+40       0.1022      0.18  Q        V|          |          |          |
13+45       0.1034      0.18  Q        V|          |          |          |
13+50       0.1047      0.19  Q        V|          |          |          |
13+55       0.1060      0.19  Q         V          |          |          |
14+ 0       0.1074      0.19  Q         V          |          |          |
14+ 5       0.1087      0.19  Q         V          |          |          |
14+10       0.1101      0.20  Q         V          |          |          |
14+15       0.1114      0.20  Q         V          |          |          |
14+20       0.1128      0.20  Q         V          |          |          |
14+25       0.1143      0.21  Q         V          |          |          |
14+30       0.1157      0.21  Q         |V         |          |          |
14+35       0.1172      0.21  Q         |V         |          |          |
14+40       0.1187      0.22  Q         |V         |          |          |
14+45       0.1202      0.22  Q         |V         |          |          |
14+50       0.1218      0.23  Q         |V         |          |          |
14+55       0.1234      0.23  Q         |V         |          |          |
15+ 0       0.1250      0.24  Q         |V         |          |          |
15+ 5       0.1267      0.24  Q         | V        |          |          |
15+10       0.1284      0.25  Q         | V        |          |          |
15+15       0.1302      0.26  |Q        | V        |          |          |
15+20       0.1320      0.26  |Q        | V        |          |          |
15+25       0.1338      0.27  |Q        | V        |          |          |
15+30       0.1356      0.26  |Q        | V        |          |          |
15+35       0.1372      0.22  Q         |  V       |          |          |
15+40       0.1385      0.20  Q         |  V       |          |          |
15+45       0.1399      0.20  Q         |  V       |          |          |
15+50       0.1414      0.21  Q         |  V       |          |          |
15+55       0.1430      0.24  Q         |  V       |          |          |
16+ 0       0.1450      0.28  |Q        |  V       |          |          |
16+ 5       0.1533      1.21  |   Q     |   V      |          |          |
```

```
16+10       0.1781      3.60  |          |   Q V  |          |          |
16+15       0.2391      8.86  |          |        | V        |    Q     |
16+20       0.2842      6.55  |          |        |     QV   |          |
16+25       0.3052      3.04  |          | Q      |        V |          |
16+30       0.3196      2.10  |        Q |        |          V          |
16+35       0.3304      1.57  |      Q   |        |          |V         |
16+40       0.3388      1.22  |    Q     |        |          | V        |
16+45       0.3453      0.93  |  Q       |        |          | V        |
16+50       0.3501      0.70  | Q        |        |          |  V       |
16+55       0.3535      0.49  |Q         |        |          |  V       |
17+ 0       0.3560      0.36  |Q         |        |          |  V       |
17+ 5       0.3583      0.34  |Q         |        |          |   V      |
17+10       0.3603      0.30  |Q         |        |          |   V      |
17+15       0.3623      0.29  |Q         |        |          |   V      |
17+20       0.3642      0.28  |Q         |        |          |   V      |
17+25       0.3659      0.24  Q          |        |          |   V      |
17+30       0.3674      0.22  Q          |        |          |   V      |
17+35       0.3687      0.19  Q          |        |          |    V     |
17+40       0.3700      0.19  Q          |        |          |    V     |
17+45       0.3712      0.18  Q          |        |          |    V     |
17+50       0.3725      0.18  Q          |        |          |    V     |
17+55       0.3737      0.17  Q          |        |          |    V     |
18+ 0       0.3748      0.17  Q          |        |          |    V     |
18+ 5       0.3760      0.17  Q          |        |          |    V     |
18+10       0.3771      0.16  Q          |        |          |    V     |
18+15       0.3781      0.15  Q          |        |          |    V     |
18+20       0.3790      0.14  Q          |        |          |     V    |
18+25       0.3799      0.13  Q          |        |          |     V    |
18+30       0.3808      0.13  Q          |        |          |     V    |
18+35       0.3816      0.12  Q          |        |          |     V    |
18+40       0.3824      0.12  Q          |        |          |     V    |
18+45       0.3832      0.12  Q          |        |          |     V    |
18+50       0.3840      0.11  Q          |        |          |     V    |
18+55       0.3848      0.11  Q          |        |          |     V    |
19+ 0       0.3855      0.11  Q          |        |          |     V    |
19+ 5       0.3863      0.11  Q          |        |          |     V    |
19+10       0.3870      0.11  Q          |        |          |     V    |
19+15       0.3877      0.10  Q          |        |          |     V    |
19+20       0.3884      0.10  Q          |        |          |     V    |
19+25       0.3891      0.10  Q          |        |          |      V   |
19+30       0.3898      0.10  Q          |        |          |      V   |
19+35       0.3905      0.10  Q          |        |          |      V   |
19+40       0.3912      0.10  Q          |        |          |      V   |
19+45       0.3918      0.10  Q          |        |          |      V   |
19+50       0.3925      0.10  Q          |        |          |      V   |
19+55       0.3931      0.09  Q          |        |          |      V   |
20+ 0       0.3938      0.09  Q          |        |          |      V   |
20+ 5       0.3944      0.09  Q          |        |          |      V   |
20+10       0.3950      0.09  Q          |        |          |      V   |
20+15       0.3957      0.09  Q          |        |          |      V   |
20+20       0.3963      0.09  Q          |        |          |      V   |
20+25       0.3969      0.09  Q          |        |          |      V   |
20+30       0.3975      0.09  Q          |        |          |      V   |
20+35       0.3981      0.09  Q          |        |          |      V   |
20+40       0.3987      0.09  Q          |        |          |      V   |
20+45       0.3992      0.08  Q          |        |          |       V  |
20+50       0.3998      0.08  Q          |        |          |       V  |
20+55       0.4004      0.08  Q          |        |          |       V  |
21+ 0       0.4010      0.08  Q          |        |          |       V  |
21+ 5       0.4015      0.08  Q          |        |          |       V  |
21+10       0.4021      0.08  Q          |        |          |       V  |
21+15       0.4026      0.08  Q          |        |          |       V  |
21+20       0.4032      0.08  Q          |        |          |       V  |
21+25       0.4037      0.08  Q          |        |          |       V  |
21+30       0.4043      0.08  Q          |        |          |       V  |
21+35       0.4048      0.08  Q          |        |          |       V  |
21+40       0.4053      0.08  Q          |        |          |       V  |
21+45       0.4059      0.08  Q          |        |          |       V  |
21+50       0.4064      0.08  Q          |        |          |       V  |
21+55       0.4069      0.08  Q          |        |          |       V  |
22+ 0       0.4074      0.07  Q          |        |          |       V  |
```

```
  22+ 5       0.4079      0.07  Q          |          |          |       V |
  22+10       0.4084      0.07  Q          |          |          |       V |
  22+15       0.4089      0.07  Q          |          |          |       V |
  22+20       0.4094      0.07  Q          |          |          |       V |
  22+25       0.4099      0.07  Q          |          |          |        V|
  22+30       0.4104      0.07  Q          |          |          |        V|
  22+35       0.4109      0.07  Q          |          |          |        V|
  22+40       0.4114      0.07  Q          |          |          |        V|
  22+45       0.4119      0.07  Q          |          |          |        V|
  22+50       0.4124      0.07  Q          |          |          |        V|
  22+55       0.4128      0.07  Q          |          |          |        V|
  23+ 0       0.4133      0.07  Q          |          |          |        V|
  23+ 5       0.4138      0.07  Q          |          |          |        V|
  23+10       0.4142      0.07  Q          |          |          |        V|
  23+15       0.4147      0.07  Q          |          |          |        V|
  23+20       0.4152      0.07  Q          |          |          |        V|
  23+25       0.4156      0.07  Q          |          |          |        V|
  23+30       0.4161      0.07  Q          |          |          |        V|
  23+35       0.4165      0.07  Q          |          |          |        V|
  23+40       0.4170      0.07  Q          |          |          |        V|
  23+45       0.4174      0.07  Q          |          |          |        V|
  23+50       0.4179      0.06  Q          |          |          |        V|
  23+55       0.4183      0.06  Q          |          |          |        V|
  24+ 0       0.4188      0.06  Q          |          |          |        V|
  24+ 5       0.4192      0.06  Q          |          |          |        V|
  24+10       0.4196      0.05  Q          |          |          |        V|
  24+15       0.4198      0.03  Q          |          |          |        V|
  24+20       0.4199      0.02  Q          |          |          |        V|
  24+25       0.4200      0.01  Q          |          |          |        V|
  24+30       0.4201      0.01  Q          |          |          |        V|
  24+35       0.4202      0.01  Q          |          |          |        V|
  24+40       0.4202      0.00  Q          |          |          |        V|
  24+45       0.4202      0.00  Q          |          |          |        V|
  24+50       0.4202      0.00  Q          |          |          |        V|
  24+55       0.4202      0.00  Q          |          |          |        V|
  25+ 0       0.4202      0.00  Q          |          |          |        V|
  25+ 5       0.4202      0.00  Q          |          |          |        V|
  25+10       0.4202      0.00  Q          |          |          |        V|
  25+15       0.4202      0.00  Q          |          |          |        V|
  25+20       0.4202      0.00  Q          |          |          |        V|
  25+25       0.4202      0.00  Q          |          |          |         V
--------------------------------------------------------------------------
```

Area 'D' – 5 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'D'
5 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             9.52            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             9.52            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             9.52           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             9.52            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             9.52            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             9.52           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 68.7      49.4          9.52      1.000     0.816    1.000    0.816

Area-averaged adjusted loss rate Fm (In/Hr) =  0.816

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
9.52	1.000	68.7	49.4	10.23	0.178

Area-averaged catchment yield fraction, Y = 0.178
Area-averaged low loss fraction, Yb = 0.822
User entry of time of concentration = 0.262 (hours)
++
Watershed area = 9.52(Ac.)
Catchment Lag time = 0.210 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 39.7583
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.816(In/Hr)
Average low loss rate fraction (Yb) = 0.822 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 9.52(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.403(In)
30-minute factor = 1.000 Adjusted rainfall = 0.690(In)
1-hour factor = 1.000 Adjusted rainfall = 0.849(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.585(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 115.13 (CFS))	
1	3.107	3.578
2	14.718	13.368
3	45.653	35.616
4	68.346	26.128
5	78.353	11.521
6	85.032	7.690
7	89.767	5.452
8	93.189	3.940
9	95.606	2.782
10	97.231	1.872
11	98.108	1.010
12	98.568	0.529
13	98.955	0.446
14	99.222	0.306
15	99.512	0.334
16	99.764	0.291
17	99.907	0.164
18	100.000	0.107

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4029	0.4029
2	0.4960	0.0931
3	0.5602	0.0642
4	0.6107	0.0505
5	0.6530	0.0423
6	0.6897	0.0367
7	0.7223	0.0326
8	0.7519	0.0295

9	0.7789	0.0270
10	0.8039	0.0250
11	0.8272	0.0233
12	0.8491	0.0219
13	0.8924	0.0433
14	0.9345	0.0421
15	0.9754	0.0409
16	1.0154	0.0399
17	1.0544	0.0390
18	1.0925	0.0381
19	1.1298	0.0373
20	1.1664	0.0366
21	1.2023	0.0359
22	1.2376	0.0353
23	1.2723	0.0347
24	1.3064	0.0341
25	1.3400	0.0336
26	1.3730	0.0331
27	1.4056	0.0326
28	1.4378	0.0321
29	1.4695	0.0317
30	1.5008	0.0313
31	1.5317	0.0309
32	1.5622	0.0305
33	1.5923	0.0302
34	1.6222	0.0298
35	1.6517	0.0295
36	1.6808	0.0292
37	1.7097	0.0289
38	1.7383	0.0286
39	1.7665	0.0283
40	1.7945	0.0280
41	1.8223	0.0277
42	1.8498	0.0275
43	1.8770	0.0272
44	1.9040	0.0270
45	1.9308	0.0268
46	1.9573	0.0265
47	1.9836	0.0263
48	2.0098	0.0261
49	2.0357	0.0259
50	2.0614	0.0257
51	2.0869	0.0255
52	2.1122	0.0253
53	2.1374	0.0251
54	2.1623	0.0250
55	2.1871	0.0248
56	2.2117	0.0246
57	2.2362	0.0245
58	2.2605	0.0243
59	2.2846	0.0241
60	2.3086	0.0240
61	2.3324	0.0238
62	2.3561	0.0237
63	2.3797	0.0235
64	2.4031	0.0234
65	2.4263	0.0233
66	2.4494	0.0231
67	2.4724	0.0230
68	2.4953	0.0229
69	2.5180	0.0227
70	2.5406	0.0226
71	2.5631	0.0225
72	2.5855	0.0224
73	2.6067	0.0212
74	2.6278	0.0211
75	2.6487	0.0210
76	2.6696	0.0208
77	2.6903	0.0207
78	2.7109	0.0206
79	2.7314	0.0205

80	2.7519	0.0204
81	2.7722	0.0203
82	2.7924	0.0202
83	2.8125	0.0201
84	2.8325	0.0200
85	2.8524	0.0199
86	2.8722	0.0198
87	2.8919	0.0197
88	2.9116	0.0196
89	2.9311	0.0195
90	2.9506	0.0194
91	2.9699	0.0194
92	2.9892	0.0193
93	3.0084	0.0192
94	3.0275	0.0191
95	3.0465	0.0190
96	3.0655	0.0189
97	3.0843	0.0189
98	3.1031	0.0188
99	3.1218	0.0187
100	3.1404	0.0186
101	3.1590	0.0186
102	3.1775	0.0185
103	3.1959	0.0184
104	3.2142	0.0183
105	3.2325	0.0183
106	3.2506	0.0182
107	3.2688	0.0181
108	3.2868	0.0180
109	3.3048	0.0180
110	3.3227	0.0179
111	3.3405	0.0178
112	3.3583	0.0178
113	3.3760	0.0177
114	3.3937	0.0177
115	3.4113	0.0176
116	3.4288	0.0175
117	3.4463	0.0175
118	3.4637	0.0174
119	3.4810	0.0173
120	3.4983	0.0173
121	3.5155	0.0172
122	3.5327	0.0172
123	3.5498	0.0171
124	3.5669	0.0171
125	3.5839	0.0170
126	3.6008	0.0169
127	3.6177	0.0169
128	3.6345	0.0168
129	3.6513	0.0168
130	3.6680	0.0167
131	3.6847	0.0167
132	3.7013	0.0166
133	3.7179	0.0166
134	3.7344	0.0165
135	3.7509	0.0165
136	3.7673	0.0164
137	3.7837	0.0164
138	3.8000	0.0163
139	3.8163	0.0163
140	3.8325	0.0162
141	3.8487	0.0162
142	3.8648	0.0161
143	3.8809	0.0161
144	3.8970	0.0160
145	3.9130	0.0160
146	3.9289	0.0160
147	3.9448	0.0159
148	3.9607	0.0159
149	3.9765	0.0158
150	3.9923	0.0158

151	4.0080	0.0157
152	4.0237	0.0157
153	4.0394	0.0156
154	4.0550	0.0156
155	4.0705	0.0156
156	4.0861	0.0155
157	4.1015	0.0155
158	4.1170	0.0154
159	4.1324	0.0154
160	4.1477	0.0154
161	4.1631	0.0153
162	4.1784	0.0153
163	4.1936	0.0152
164	4.2088	0.0152
165	4.2240	0.0152
166	4.2391	0.0151
167	4.2542	0.0151
168	4.2693	0.0151
169	4.2843	0.0150
170	4.2993	0.0150
171	4.3142	0.0150
172	4.3292	0.0149
173	4.3440	0.0149
174	4.3589	0.0148
175	4.3737	0.0148
176	4.3885	0.0148
177	4.4032	0.0147
178	4.4179	0.0147
179	4.4326	0.0147
180	4.4472	0.0146
181	4.4618	0.0146
182	4.4764	0.0146
183	4.4910	0.0145
184	4.5055	0.0145
185	4.5200	0.0145
186	4.5344	0.0144
187	4.5488	0.0144
188	4.5632	0.0144
189	4.5776	0.0144
190	4.5919	0.0143
191	4.6062	0.0143
192	4.6204	0.0143
193	4.6346	0.0142
194	4.6488	0.0142
195	4.6630	0.0142
196	4.6772	0.0141
197	4.6913	0.0141
198	4.7053	0.0141
199	4.7194	0.0141
200	4.7334	0.0140
201	4.7474	0.0140
202	4.7614	0.0140
203	4.7753	0.0139
204	4.7892	0.0139
205	4.8031	0.0139
206	4.8170	0.0139
207	4.8308	0.0138
208	4.8446	0.0138
209	4.8584	0.0138
210	4.8721	0.0137
211	4.8858	0.0137
212	4.8995	0.0137
213	4.9132	0.0137
214	4.9268	0.0136
215	4.9405	0.0136
216	4.9540	0.0136
217	4.9676	0.0136
218	4.9811	0.0135
219	4.9947	0.0135
220	5.0081	0.0135
221	5.0216	0.0135

222	5.0350	0.0134
223	5.0485	0.0134
224	5.0618	0.0134
225	5.0752	0.0134
226	5.0885	0.0133
227	5.1019	0.0133
228	5.1152	0.0133
229	5.1284	0.0133
230	5.1417	0.0132
231	5.1549	0.0132
232	5.1681	0.0132
233	5.1813	0.0132
234	5.1944	0.0132
235	5.2075	0.0131
236	5.2206	0.0131
237	5.2337	0.0131
238	5.2468	0.0131
239	5.2598	0.0130
240	5.2728	0.0130
241	5.2858	0.0130
242	5.2988	0.0130
243	5.3118	0.0129
244	5.3247	0.0129
245	5.3376	0.0129
246	5.3505	0.0129
247	5.3633	0.0129
248	5.3762	0.0128
249	5.3890	0.0128
250	5.4018	0.0128
251	5.4146	0.0128
252	5.4273	0.0128
253	5.4401	0.0127
254	5.4528	0.0127
255	5.4655	0.0127
256	5.4782	0.0127
257	5.4908	0.0127
258	5.5035	0.0126
259	5.5161	0.0126
260	5.5287	0.0126
261	5.5413	0.0126
262	5.5538	0.0126
263	5.5663	0.0125
264	5.5789	0.0125
265	5.5914	0.0125
266	5.6038	0.0125
267	5.6163	0.0125
268	5.6287	0.0124
269	5.6412	0.0124
270	5.6536	0.0124
271	5.6660	0.0124
272	5.6783	0.0124
273	5.6907	0.0123
274	5.7030	0.0123
275	5.7153	0.0123
276	5.7276	0.0123
277	5.7399	0.0123
278	5.7521	0.0123
279	5.7644	0.0122
280	5.7766	0.0122
281	5.7888	0.0122
282	5.8010	0.0122
283	5.8131	0.0122
284	5.8253	0.0121
285	5.8374	0.0121
286	5.8495	0.0121
287	5.8616	0.0121
288	5.8737	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)

1	0.0121	0.0099	0.0021
2	0.0121	0.0100	0.0021
3	0.0121	0.0100	0.0022
4	0.0121	0.0100	0.0022
5	0.0122	0.0100	0.0022
6	0.0122	0.0100	0.0022
7	0.0122	0.0101	0.0022
8	0.0123	0.0101	0.0022
9	0.0123	0.0101	0.0022
10	0.0123	0.0101	0.0022
11	0.0123	0.0102	0.0022
12	0.0124	0.0102	0.0022
13	0.0124	0.0102	0.0022
14	0.0124	0.0102	0.0022
15	0.0125	0.0102	0.0022
16	0.0125	0.0103	0.0022
17	0.0125	0.0103	0.0022
18	0.0125	0.0103	0.0022
19	0.0126	0.0103	0.0022
20	0.0126	0.0104	0.0022
21	0.0126	0.0104	0.0022
22	0.0127	0.0104	0.0022
23	0.0127	0.0104	0.0023
24	0.0127	0.0105	0.0023
25	0.0128	0.0105	0.0023
26	0.0128	0.0105	0.0023
27	0.0128	0.0105	0.0023
28	0.0128	0.0106	0.0023
29	0.0129	0.0106	0.0023
30	0.0129	0.0106	0.0023
31	0.0129	0.0107	0.0023
32	0.0130	0.0107	0.0023
33	0.0130	0.0107	0.0023
34	0.0130	0.0107	0.0023
35	0.0131	0.0108	0.0023
36	0.0131	0.0108	0.0023
37	0.0132	0.0108	0.0023
38	0.0132	0.0108	0.0023
39	0.0132	0.0109	0.0023
40	0.0132	0.0109	0.0024
41	0.0133	0.0109	0.0024
42	0.0133	0.0110	0.0024
43	0.0134	0.0110	0.0024
44	0.0134	0.0110	0.0024
45	0.0134	0.0111	0.0024
46	0.0135	0.0111	0.0024
47	0.0135	0.0111	0.0024
48	0.0135	0.0111	0.0024
49	0.0136	0.0112	0.0024
50	0.0136	0.0112	0.0024
51	0.0137	0.0112	0.0024
52	0.0137	0.0113	0.0024
53	0.0137	0.0113	0.0024
54	0.0138	0.0113	0.0024
55	0.0138	0.0114	0.0025
56	0.0139	0.0114	0.0025
57	0.0139	0.0114	0.0025
58	0.0139	0.0115	0.0025
59	0.0140	0.0115	0.0025
60	0.0140	0.0115	0.0025
61	0.0141	0.0116	0.0025
62	0.0141	0.0116	0.0025
63	0.0142	0.0117	0.0025
64	0.0142	0.0117	0.0025
65	0.0143	0.0117	0.0025
66	0.0143	0.0118	0.0025
67	0.0144	0.0118	0.0025
68	0.0144	0.0118	0.0026
69	0.0144	0.0119	0.0026
70	0.0145	0.0119	0.0026

71	0.0145	0.0120	0.0026
72	0.0146	0.0120	0.0026
73	0.0146	0.0120	0.0026
74	0.0147	0.0121	0.0026
75	0.0147	0.0121	0.0026
76	0.0148	0.0122	0.0026
77	0.0148	0.0122	0.0026
78	0.0149	0.0122	0.0026
79	0.0150	0.0123	0.0027
80	0.0150	0.0123	0.0027
81	0.0151	0.0124	0.0027
82	0.0151	0.0124	0.0027
83	0.0152	0.0125	0.0027
84	0.0152	0.0125	0.0027
85	0.0153	0.0126	0.0027
86	0.0153	0.0126	0.0027
87	0.0154	0.0127	0.0027
88	0.0154	0.0127	0.0027
89	0.0155	0.0128	0.0028
90	0.0156	0.0128	0.0028
91	0.0156	0.0129	0.0028
92	0.0157	0.0129	0.0028
93	0.0158	0.0130	0.0028
94	0.0158	0.0130	0.0028
95	0.0159	0.0131	0.0028
96	0.0160	0.0131	0.0028
97	0.0160	0.0132	0.0028
98	0.0161	0.0132	0.0029
99	0.0162	0.0133	0.0029
100	0.0162	0.0133	0.0029
101	0.0163	0.0134	0.0029
102	0.0164	0.0135	0.0029
103	0.0165	0.0135	0.0029
104	0.0165	0.0136	0.0029
105	0.0166	0.0137	0.0030
106	0.0167	0.0137	0.0030
107	0.0168	0.0138	0.0030
108	0.0168	0.0138	0.0030
109	0.0169	0.0139	0.0030
110	0.0170	0.0140	0.0030
111	0.0171	0.0141	0.0030
112	0.0172	0.0141	0.0030
113	0.0173	0.0142	0.0031
114	0.0173	0.0143	0.0031
115	0.0175	0.0144	0.0031
116	0.0175	0.0144	0.0031
117	0.0177	0.0145	0.0031
118	0.0177	0.0146	0.0031
119	0.0178	0.0147	0.0032
120	0.0179	0.0147	0.0032
121	0.0180	0.0148	0.0032
122	0.0181	0.0149	0.0032
123	0.0183	0.0150	0.0032
124	0.0183	0.0151	0.0033
125	0.0185	0.0152	0.0033
126	0.0186	0.0153	0.0033
127	0.0187	0.0154	0.0033
128	0.0188	0.0154	0.0033
129	0.0189	0.0156	0.0034
130	0.0190	0.0156	0.0034
131	0.0192	0.0158	0.0034
132	0.0193	0.0159	0.0034
133	0.0194	0.0160	0.0035
134	0.0195	0.0161	0.0035
135	0.0197	0.0162	0.0035
136	0.0198	0.0163	0.0035
137	0.0200	0.0165	0.0036
138	0.0201	0.0165	0.0036
139	0.0203	0.0167	0.0036
140	0.0204	0.0168	0.0036
141	0.0206	0.0170	0.0037

142	0.0207	0.0171	0.0037
143	0.0210	0.0172	0.0037
144	0.0211	0.0173	0.0037
145	0.0224	0.0184	0.0040
146	0.0225	0.0185	0.0040
147	0.0227	0.0187	0.0040
148	0.0229	0.0188	0.0041
149	0.0231	0.0190	0.0041
150	0.0233	0.0191	0.0041
151	0.0235	0.0194	0.0042
152	0.0237	0.0195	0.0042
153	0.0240	0.0197	0.0043
154	0.0241	0.0198	0.0043
155	0.0245	0.0201	0.0043
156	0.0246	0.0202	0.0044
157	0.0250	0.0205	0.0044
158	0.0251	0.0207	0.0045
159	0.0255	0.0210	0.0045
160	0.0257	0.0211	0.0046
161	0.0261	0.0215	0.0046
162	0.0263	0.0217	0.0047
163	0.0268	0.0220	0.0048
164	0.0270	0.0222	0.0048
165	0.0275	0.0226	0.0049
166	0.0277	0.0228	0.0049
167	0.0283	0.0233	0.0050
168	0.0286	0.0235	0.0051
169	0.0292	0.0240	0.0052
170	0.0295	0.0243	0.0052
171	0.0302	0.0248	0.0054
172	0.0305	0.0251	0.0054
173	0.0313	0.0257	0.0056
174	0.0317	0.0261	0.0056
175	0.0326	0.0268	0.0058
176	0.0331	0.0272	0.0059
177	0.0341	0.0281	0.0061
178	0.0347	0.0285	0.0062
179	0.0359	0.0295	0.0064
180	0.0366	0.0301	0.0065
181	0.0381	0.0314	0.0068
182	0.0390	0.0321	0.0069
183	0.0409	0.0337	0.0073
184	0.0421	0.0346	0.0075
185	0.0219	0.0180	0.0039
186	0.0233	0.0192	0.0041
187	0.0270	0.0222	0.0048
188	0.0295	0.0243	0.0052
189	0.0367	0.0302	0.0065
190	0.0423	0.0348	0.0075
191	0.0642	0.0528	0.0114
192	0.0931	0.0680	0.0251
193	0.4029	0.0680	0.3349
194	0.0505	0.0415	0.0090
195	0.0326	0.0268	0.0058
196	0.0250	0.0206	0.0044
197	0.0433	0.0356	0.0077
198	0.0399	0.0328	0.0071
199	0.0373	0.0307	0.0066
200	0.0353	0.0290	0.0063
201	0.0336	0.0276	0.0060
202	0.0321	0.0264	0.0057
203	0.0309	0.0254	0.0055
204	0.0298	0.0245	0.0053
205	0.0289	0.0237	0.0051
206	0.0280	0.0230	0.0050
207	0.0272	0.0224	0.0048
208	0.0265	0.0218	0.0047
209	0.0259	0.0213	0.0046
210	0.0253	0.0208	0.0045
211	0.0248	0.0204	0.0044
212	0.0243	0.0200	0.0043

213	0.0238	0.0196	0.0042
214	0.0234	0.0192	0.0042
215	0.0230	0.0189	0.0041
216	0.0226	0.0186	0.0040
217	0.0212	0.0174	0.0038
218	0.0208	0.0171	0.0037
219	0.0205	0.0169	0.0036
220	0.0202	0.0166	0.0036
221	0.0199	0.0164	0.0035
222	0.0196	0.0161	0.0035
223	0.0194	0.0159	0.0034
224	0.0191	0.0157	0.0034
225	0.0189	0.0155	0.0033
226	0.0186	0.0153	0.0033
227	0.0184	0.0151	0.0033
228	0.0182	0.0150	0.0032
229	0.0180	0.0148	0.0032
230	0.0178	0.0146	0.0032
231	0.0176	0.0145	0.0031
232	0.0174	0.0143	0.0031
233	0.0172	0.0142	0.0031
234	0.0171	0.0140	0.0030
235	0.0169	0.0139	0.0030
236	0.0167	0.0138	0.0030
237	0.0166	0.0136	0.0029
238	0.0164	0.0135	0.0029
239	0.0163	0.0134	0.0029
240	0.0161	0.0133	0.0029
241	0.0160	0.0132	0.0028
242	0.0159	0.0130	0.0028
243	0.0157	0.0129	0.0028
244	0.0156	0.0128	0.0028
245	0.0155	0.0127	0.0027
246	0.0154	0.0126	0.0027
247	0.0152	0.0125	0.0027
248	0.0151	0.0124	0.0027
249	0.0150	0.0124	0.0027
250	0.0149	0.0123	0.0026
251	0.0148	0.0122	0.0026
252	0.0147	0.0121	0.0026
253	0.0146	0.0120	0.0026
254	0.0145	0.0119	0.0026
255	0.0144	0.0119	0.0026
256	0.0143	0.0118	0.0025
257	0.0142	0.0117	0.0025
258	0.0141	0.0116	0.0025
259	0.0141	0.0116	0.0025
260	0.0140	0.0115	0.0025
261	0.0139	0.0114	0.0025
262	0.0138	0.0114	0.0025
263	0.0137	0.0113	0.0024
264	0.0136	0.0112	0.0024
265	0.0136	0.0112	0.0024
266	0.0135	0.0111	0.0024
267	0.0134	0.0110	0.0024
268	0.0133	0.0110	0.0024
269	0.0133	0.0109	0.0024
270	0.0132	0.0109	0.0023
271	0.0131	0.0108	0.0023
272	0.0131	0.0107	0.0023
273	0.0130	0.0107	0.0023
274	0.0129	0.0106	0.0023
275	0.0129	0.0106	0.0023
276	0.0128	0.0105	0.0023
277	0.0127	0.0105	0.0023
278	0.0127	0.0104	0.0023
279	0.0126	0.0104	0.0022
280	0.0126	0.0103	0.0022
281	0.0125	0.0103	0.0022
282	0.0124	0.0102	0.0022
283	0.0124	0.0102	0.0022

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      284              0.0123           0.0101              0.0022
      285              0.0123           0.0101              0.0022
      286              0.0122           0.0101              0.0022
      287              0.0122           0.0100              0.0022
      288              0.0121           0.0100              0.0022
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      4.56(In)
      Total effective rainfall =      1.31(In)
      Peak flow rate in flood hydrograph =     13.01(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0001      0.01  Q         |         |         |         |
  0+10       0.0003      0.04  Q         |         |         |         |
  0+15       0.0011      0.11  Q         |         |         |         |
  0+20       0.0022      0.17  Q         |         |         |         |
  0+25       0.0036      0.19  Q         |         |         |         |
  0+30       0.0050      0.21  Q         |         |         |         |
  0+35       0.0066      0.22  Q         |         |         |         |
  0+40       0.0082      0.23  Q         |         |         |         |
  0+45       0.0098      0.24  Q         |         |         |         |
  0+50       0.0115      0.24  Q         |         |         |         |
  0+55       0.0132      0.25  Q         |         |         |         |
  1+ 0       0.0149      0.25  Q         |         |         |         |
  1+ 5       0.0166      0.25  Q         |         |         |         |
  1+10       0.0183      0.25  Q         |         |         |         |
  1+15       0.0201      0.25  Q         |         |         |         |
  1+20       0.0218      0.25  Q         |         |         |         |
  1+25       0.0235      0.25  Q         |         |         |         |
  1+30       0.0253      0.25  Q         |         |         |         |
  1+35       0.0271      0.26  QV        |         |         |         |
  1+40       0.0288      0.26  QV        |         |         |         |
  1+45       0.0306      0.26  QV        |         |         |         |
  1+50       0.0323      0.26  QV        |         |         |         |
  1+55       0.0341      0.26  QV        |         |         |         |
  2+ 0       0.0359      0.26  QV        |         |         |         |
  2+ 5       0.0377      0.26  QV        |         |         |         |
  2+10       0.0395      0.26  QV        |         |         |         |
  2+15       0.0412      0.26  QV        |         |         |         |
  2+20       0.0430      0.26  QV        |         |         |         |
  2+25       0.0448      0.26  QV        |         |         |         |
  2+30       0.0466      0.26  QV        |         |         |         |
  2+35       0.0485      0.26  QV        |         |         |         |
  2+40       0.0503      0.26  QV        |         |         |         |
  2+45       0.0521      0.26  QV        |         |         |         |
  2+50       0.0539      0.26  Q V       |         |         |         |
  2+55       0.0557      0.27  Q V       |         |         |         |
  3+ 0       0.0576      0.27  Q V       |         |         |         |
  3+ 5       0.0594      0.27  Q V       |         |         |         |
  3+10       0.0612      0.27  Q V       |         |         |         |
  3+15       0.0631      0.27  Q V       |         |         |         |
  3+20       0.0649      0.27  Q V       |         |         |         |
  3+25       0.0668      0.27  Q V       |         |         |         |
  3+30       0.0686      0.27  Q V       |         |         |         |
  3+35       0.0705      0.27  Q V       |         |         |         |
  3+40       0.0724      0.27  Q V       |         |         |         |
  3+45       0.0742      0.27  Q V       |         |         |         |
  3+50       0.0761      0.27  Q V       |         |         |         |
  3+55       0.0780      0.27  Q V       |         |         |         |
  4+ 0       0.0799      0.27  Q  V      |         |         |         |
  4+ 5       0.0818      0.28  Q  V      |         |         |         |
  4+10       0.0837      0.28  Q  V      |         |         |         |
  4+15       0.0856      0.28  Q  V      |         |         |         |
```

```
 4+20      0.0875      0.28  Q  V      |          |          |          |
 4+25      0.0894      0.28  Q  V      |          |          |          |
 4+30      0.0913      0.28  Q  V      |          |          |          |
 4+35      0.0933      0.28  Q  V      |          |          |          |
 4+40      0.0952      0.28  Q  V      |          |          |          |
 4+45      0.0971      0.28  Q  V      |          |          |          |
 4+50      0.0991      0.28  Q  V      |          |          |          |
 4+55      0.1010      0.28  Q  V      |          |          |          |
 5+ 0      0.1030      0.28  Q  V      |          |          |          |
 5+ 5      0.1049      0.28  Q   V     |          |          |          |
 5+10      0.1069      0.29  Q   V     |          |          |          |
 5+15      0.1089      0.29  Q   V     |          |          |          |
 5+20      0.1109      0.29  Q   V     |          |          |          |
 5+25      0.1129      0.29  Q   V     |          |          |          |
 5+30      0.1148      0.29  Q   V     |          |          |          |
 5+35      0.1168      0.29  Q   V     |          |          |          |
 5+40      0.1188      0.29  Q   V     |          |          |          |
 5+45      0.1209      0.29  Q   V     |          |          |          |
 5+50      0.1229      0.29  Q   V     |          |          |          |
 5+55      0.1249      0.29  Q   V     |          |          |          |
 6+ 0      0.1269      0.29  Q   V     |          |          |          |
 6+ 5      0.1290      0.30  Q   V     |          |          |          |
 6+10      0.1310      0.30  Q    V    |          |          |          |
 6+15      0.1331      0.30  Q    V    |          |          |          |
 6+20      0.1351      0.30  Q    V    |          |          |          |
 6+25      0.1372      0.30  Q    V    |          |          |          |
 6+30      0.1393      0.30  Q    V    |          |          |          |
 6+35      0.1413      0.30  Q    V    |          |          |          |
 6+40      0.1434      0.30  Q    V    |          |          |          |
 6+45      0.1455      0.30  Q    V    |          |          |          |
 6+50      0.1476      0.31  Q    V    |          |          |          |
 6+55      0.1497      0.31  Q    V    |          |          |          |
 7+ 0      0.1518      0.31  Q    V    |          |          |          |
 7+ 5      0.1540      0.31  Q    V    |          |          |          |
 7+10      0.1561      0.31  Q    V    |          |          |          |
 7+15      0.1582      0.31  Q     V   |          |          |          |
 7+20      0.1604      0.31  Q     V   |          |          |          |
 7+25      0.1625      0.31  Q     V   |          |          |          |
 7+30      0.1647      0.31  Q     V   |          |          |          |
 7+35      0.1669      0.32  Q     V   |          |          |          |
 7+40      0.1691      0.32  Q     V   |          |          |          |
 7+45      0.1713      0.32  Q     V   |          |          |          |
 7+50      0.1734      0.32  Q     V   |          |          |          |
 7+55      0.1757      0.32  Q     V   |          |          |          |
 8+ 0      0.1779      0.32  Q     V   |          |          |          |
 8+ 5      0.1801      0.32  Q     V   |          |          |          |
 8+10      0.1823      0.32  Q     V   |          |          |          |
 8+15      0.1846      0.33  Q      V  |          |          |          |
 8+20      0.1868      0.33  Q      V  |          |          |          |
 8+25      0.1891      0.33  Q      V  |          |          |          |
 8+30      0.1914      0.33  Q      V  |          |          |          |
 8+35      0.1937      0.33  Q      V  |          |          |          |
 8+40      0.1959      0.33  Q      V  |          |          |          |
 8+45      0.1982      0.33  Q      V  |          |          |          |
 8+50      0.2006      0.34  Q      V  |          |          |          |
 8+55      0.2029      0.34  Q      V  |          |          |          |
 9+ 0      0.2052      0.34  Q      V  |          |          |          |
 9+ 5      0.2076      0.34  Q      V  |          |          |          |
 9+10      0.2099      0.34  Q       V |          |          |          |
 9+15      0.2123      0.34  Q       V |          |          |          |
 9+20      0.2147      0.35  Q       V |          |          |          |
 9+25      0.2171      0.35  Q       V |          |          |          |
 9+30      0.2195      0.35  Q       V |          |          |          |
 9+35      0.2219      0.35  Q       V |          |          |          |
 9+40      0.2243      0.35  Q       V |          |          |          |
 9+45      0.2268      0.35  Q       V |          |          |          |
 9+50      0.2292      0.36  Q       V |          |          |          |
 9+55      0.2317      0.36  Q       V |          |          |          |
10+ 0      0.2341      0.36  Q       V |          |          |          |
10+ 5      0.2366      0.36  Q        V|          |          |          |
10+10      0.2391      0.36  Q        V|          |          |          |
```

```
10+15      0.2417      0.37  Q       V|         |         |         |
10+20      0.2442      0.37  Q       V|         |         |         |
10+25      0.2467      0.37  Q       V|         |         |         |
10+30      0.2493      0.37  Q       V|         |         |         |
10+35      0.2519      0.37  Q       V|         |         |         |
10+40      0.2545      0.38  Q       V|         |         |         |
10+45      0.2571      0.38  Q       V|         |         |         |
10+50      0.2597      0.38  Q       V|         |         |         |
10+55      0.2624      0.38  Q        V         |         |         |
11+ 0      0.2650      0.39  Q        V         |         |         |
11+ 5      0.2677      0.39  Q        V         |         |         |
11+10      0.2704      0.39  Q        V         |         |         |
11+15      0.2731      0.39  Q        V         |         |         |
11+20      0.2758      0.40  Q        V         |         |         |
11+25      0.2786      0.40  Q        V         |         |         |
11+30      0.2813      0.40  Q        V         |         |         |
11+35      0.2841      0.40  Q        V         |         |         |
11+40      0.2869      0.41  Q        |V        |         |         |
11+45      0.2898      0.41  Q        |V        |         |         |
11+50      0.2926      0.41  Q        |V        |         |         |
11+55      0.2955      0.42  Q        |V        |         |         |
12+ 0      0.2984      0.42  Q        |V        |         |         |
12+ 5      0.3013      0.42  Q        |V        |         |         |
12+10      0.3043      0.43  Q        |V        |         |         |
12+15      0.3073      0.44  Q        |V        |         |         |
12+20      0.3104      0.45  Q        |V        |         |         |
12+25      0.3135      0.45  Q        | V       |         |         |
12+30      0.3167      0.46  Q        | V       |         |         |
12+35      0.3199      0.46  Q        | V       |         |         |
12+40      0.3231      0.47  Q        | V       |         |         |
12+45      0.3264      0.47  Q        | V       |         |         |
12+50      0.3297      0.48  Q        | V       |         |         |
12+55      0.3330      0.48  Q        | V       |         |         |
13+ 0      0.3364      0.49  Q        | V       |         |         |
13+ 5      0.3398      0.49  Q        |  V      |         |         |
13+10      0.3432      0.50  Q        |  V      |         |         |
13+15      0.3467      0.50  |Q       |  V      |         |         |
13+20      0.3502      0.51  |Q       |  V      |         |         |
13+25      0.3537      0.51  |Q       |  V      |         |         |
13+30      0.3573      0.52  |Q       |  V      |         |         |
13+35      0.3609      0.53  |Q       |  V      |         |         |
13+40      0.3645      0.53  |Q       |  V      |         |         |
13+45      0.3682      0.54  |Q       |   V     |         |         |
13+50      0.3720      0.54  |Q       |   V     |         |         |
13+55      0.3758      0.55  |Q       |   V     |         |         |
14+ 0      0.3796      0.56  |Q       |   V     |         |         |
14+ 5      0.3835      0.57  |Q       |   V     |         |         |
14+10      0.3875      0.57  |Q       |   V     |         |         |
14+15      0.3915      0.58  |Q       |    V    |         |         |
14+20      0.3956      0.59  |Q       |    V    |         |         |
14+25      0.3998      0.60  |Q       |    V    |         |         |
14+30      0.4040      0.61  |Q       |    V    |         |         |
14+35      0.4083      0.62  |Q       |    V    |         |         |
14+40      0.4126      0.64  |Q       |    V    |         |         |
14+45      0.4171      0.65  |Q       |     V   |         |         |
14+50      0.4217      0.66  |Q       |     V   |         |         |
14+55      0.4263      0.68  |Q       |     V   |         |         |
15+ 0      0.4311      0.69  |Q       |     V   |         |         |
15+ 5      0.4360      0.71  |Q       |     V   |         |         |
15+10      0.4410      0.73  |Q       |     V   |         |         |
15+15      0.4462      0.75  |Q       |      V  |         |         |
15+20      0.4515      0.77  |Q       |      V  |         |         |
15+25      0.4569      0.79  |Q       |      V  |         |         |
15+30      0.4621      0.76  |Q       |      V  |         |         |
15+35      0.4666      0.65  |Q       |      V  |         |         |
15+40      0.4707      0.59  |Q       |       V |         |         |
15+45      0.4748      0.59  |Q       |       V |         |         |
15+50      0.4791      0.62  |Q       |       V |         |         |
15+55      0.4839      0.70  |Q       |       V |         |         |
16+ 0      0.4899      0.87  |Q       |       V |         |         |
16+ 5      0.5060      2.34  |   Q    |        V|         |         |
```

```
16+10       0.5468      5.93  |          |Q         V          |          |
16+15       0.6364     13.01  |          |          |   V Q    |          |
16+20       0.7029      9.65  |          |         Q|     V    |          |
16+25       0.7353      4.72  |         Q|          |       V  |          |
16+30       0.7584      3.35  |     Q    |          |         V|          |
16+35       0.7765      2.63  |    Q     |          |         V|          |
16+40       0.7913      2.14  |   Q      |          |          V          |
16+45       0.8031      1.72  |  Q       |          |          V          |
16+50       0.8126      1.38  | Q        |          |          |V         |
16+55       0.8199      1.06  | Q        |          |          |V         |
17+ 0       0.8259      0.87  |Q         |          |          |V         |
17+ 5       0.8315      0.82  |Q         |          |          |V         |
17+10       0.8367      0.75  |Q         |          |          | V        |
17+15       0.8418      0.74  |Q         |          |          | V        |
17+20       0.8466      0.70  |Q         |          |          | V        |
17+25       0.8510      0.64  |Q         |          |          | V        |
17+30       0.8552      0.60  |Q         |          |          | V        |
17+35       0.8590      0.55  |Q         |          |          | V        |
17+40       0.8627      0.54  |Q         |          |          |  V       |
17+45       0.8663      0.53  |Q         |          |          |  V       |
17+50       0.8698      0.51  |Q         |          |          |  V       |
17+55       0.8733      0.50  |Q         |          |          |  V       |
18+ 0       0.8767      0.49  Q          |          |          |  V       |
18+ 5       0.8800      0.48  Q          |          |          |  V       |
18+10       0.8833      0.47  Q          |          |          |  V       |
18+15       0.8864      0.46  Q          |          |          |   V      |
18+20       0.8895      0.44  Q          |          |          |   V      |
18+25       0.8925      0.43  Q          |          |          |   V      |
18+30       0.8954      0.43  Q          |          |          |   V      |
18+35       0.8983      0.42  Q          |          |          |   V      |
18+40       0.9011      0.41  Q          |          |          |   V      |
18+45       0.9039      0.41  Q          |          |          |   V      |
18+50       0.9067      0.40  Q          |          |          |   V      |
18+55       0.9094      0.39  Q          |          |          |   V      |
19+ 0       0.9120      0.39  Q          |          |          |   V      |
19+ 5       0.9147      0.38  Q          |          |          |    V     |
19+10       0.9173      0.38  Q          |          |          |    V     |
19+15       0.9199      0.37  Q          |          |          |    V     |
19+20       0.9224      0.37  Q          |          |          |    V     |
19+25       0.9249      0.37  Q          |          |          |    V     |
19+30       0.9274      0.36  Q          |          |          |    V     |
19+35       0.9299      0.36  Q          |          |          |    V     |
19+40       0.9323      0.35  Q          |          |          |    V     |
19+45       0.9347      0.35  Q          |          |          |    V     |
19+50       0.9371      0.35  Q          |          |          |    V     |
19+55       0.9395      0.34  Q          |          |          |     V    |
20+ 0       0.9418      0.34  Q          |          |          |     V    |
20+ 5       0.9441      0.34  Q          |          |          |     V    |
20+10       0.9464      0.33  Q          |          |          |     V    |
20+15       0.9487      0.33  Q          |          |          |     V    |
20+20       0.9510      0.33  Q          |          |          |     V    |
20+25       0.9532      0.33  Q          |          |          |     V    |
20+30       0.9554      0.32  Q          |          |          |     V    |
20+35       0.9576      0.32  Q          |          |          |     V    |
20+40       0.9598      0.32  Q          |          |          |     V    |
20+45       0.9620      0.32  Q          |          |          |     V    |
20+50       0.9642      0.31  Q          |          |          |     V    |
20+55       0.9663      0.31  Q          |          |          |      V   |
21+ 0       0.9684      0.31  Q          |          |          |      V   |
21+ 5       0.9705      0.31  Q          |          |          |      V   |
21+10       0.9726      0.30  Q          |          |          |      V   |
21+15       0.9747      0.30  Q          |          |          |      V   |
21+20       0.9768      0.30  Q          |          |          |      V   |
21+25       0.9788      0.30  Q          |          |          |      V   |
21+30       0.9808      0.30  Q          |          |          |      V   |
21+35       0.9829      0.29  Q          |          |          |      V   |
21+40       0.9849      0.29  Q          |          |          |      V   |
21+45       0.9869      0.29  Q          |          |          |      V   |
21+50       0.9888      0.29  Q          |          |          |      V   |
21+55       0.9908      0.29  Q          |          |          |       V  |
22+ 0       0.9928      0.28  Q          |          |          |       V  |
```

```
  22+ 5       0.9947      0.28  Q          |          |          |       V |
  22+10       0.9967      0.28  Q          |          |          |       V |
  22+15       0.9986      0.28  Q          |          |          |       V |
  22+20       1.0005      0.28  Q          |          |          |       V |
  22+25       1.0024      0.28  Q          |          |          |       V |
  22+30       1.0043      0.27  Q          |          |          |       V |
  22+35       1.0062      0.27  Q          |          |          |       V |
  22+40       1.0081      0.27  Q          |          |          |       V |
  22+45       1.0099      0.27  Q          |          |          |       V |
  22+50       1.0118      0.27  Q          |          |          |       V |
  22+55       1.0136      0.27  Q          |          |          |       V |
  23+ 0       1.0154      0.27  Q          |          |          |       V |
  23+ 5       1.0173      0.26  Q          |          |          |        V|
  23+10       1.0191      0.26  Q          |          |          |        V|
  23+15       1.0209      0.26  Q          |          |          |        V|
  23+20       1.0227      0.26  Q          |          |          |        V|
  23+25       1.0245      0.26  Q          |          |          |        V|
  23+30       1.0262      0.26  Q          |          |          |        V|
  23+35       1.0280      0.26  Q          |          |          |        V|
  23+40       1.0298      0.26  Q          |          |          |        V|
  23+45       1.0315      0.25  Q          |          |          |        V|
  23+50       1.0333      0.25  Q          |          |          |        V|
  23+55       1.0350      0.25  Q          |          |          |        V|
  24+ 0       1.0368      0.25  Q          |          |          |        V|
  24+ 5       1.0384      0.24  Q          |          |          |        V|
  24+10       1.0399      0.21  Q          |          |          |        V|
  24+15       1.0408      0.14  Q          |          |          |        V|
  24+20       1.0414      0.08  Q          |          |          |        V|
  24+25       1.0417      0.05  Q          |          |          |        V|
  24+30       1.0420      0.04  Q          |          |          |        V|
  24+35       1.0422      0.03  Q          |          |          |        V|
  24+40       1.0423      0.02  Q          |          |          |        V|
  24+45       1.0424      0.01  Q          |          |          |        V|
  24+50       1.0424      0.01  Q          |          |          |        V|
  24+55       1.0424      0.00  Q          |          |          |        V|
  25+ 0       1.0425      0.00  Q          |          |          |        V|
  25+ 5       1.0425      0.00  Q          |          |          |        V|
  25+10       1.0425      0.00  Q          |          |          |        V|
  25+15       1.0425      0.00  Q          |          |          |        V|
  25+20       1.0425      0.00  Q          |          |          |        V|
  25+25       1.0425      0.00  Q          |          |          |         V
-------------------------------------------------------------------------
```

Area 'D' – 10 Year 24 Hour - Existing Condition – Unit Hydrograph

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

       Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

              Study date  11/11/24

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----------------------------------------------------------------------

San Bernardino County Synthetic Unit Hydrology Method
              Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'D'
10 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

       Storm Event Year = 10

       Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
       Sub-Area        Duration        Isohyetal
       (Ac.)            (hours)         (In)
Rainfall data for year 10
            9.52           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            9.52           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            9.52          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            9.52           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            9.52           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            9.52          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 68.7      68.7          9.52      1.000     0.553    1.000    0.553

Area-averaged adjusted loss rate Fm (In/Hr) =  0.553

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
9.52	1.000	68.7	68.7	4.56	0.510

Area-averaged catchment yield fraction, Y = 0.510
Area-averaged low loss fraction, Yb = 0.490
User entry of time of concentration = 0.262 (hours)

++

Watershed area = 9.52(Ac.)
Catchment Lag time = 0.210 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 39.7583
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.553(In/Hr)
Average low loss rate fraction (Yb) = 0.490 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 9.52(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.474(In)
30-minute factor = 1.000 Adjusted rainfall = 0.812(In)
1-hour factor = 1.000 Adjusted rainfall = 1.000(In)
3-hour factor = 1.000 Adjusted rainfall = 1.973(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

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

++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 115.13 (CFS))	
1	3.107	3.578
2	14.718	13.368
3	45.653	35.616
4	68.346	26.128
5	78.353	11.521
6	85.032	7.690
7	89.767	5.452
8	93.189	3.940
9	95.606	2.782
10	97.231	1.872
11	98.108	1.010
12	98.568	0.529
13	98.955	0.446
14	99.222	0.306
15	99.512	0.334
16	99.764	0.291
17	99.907	0.164
18	100.000	0.107

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4743	0.4743
2	0.5839	0.1096
3	0.6595	0.0755
4	0.7189	0.0594
5	0.7687	0.0498
6	0.8119	0.0432
7	0.8503	0.0384
8	0.8851	0.0348

9	0.9169	0.0318
10	0.9463	0.0294
11	0.9738	0.0274
12	0.9996	0.0258
13	1.0503	0.0508
14	1.0996	0.0493
15	1.1476	0.0480
16	1.1943	0.0468
17	1.2400	0.0457
18	1.2846	0.0446
19	1.3283	0.0437
20	1.3711	0.0428
21	1.4132	0.0420
22	1.4544	0.0413
23	1.4950	0.0406
24	1.5349	0.0399
25	1.5742	0.0393
26	1.6128	0.0387
27	1.6509	0.0381
28	1.6885	0.0376
29	1.7256	0.0371
30	1.7622	0.0366
31	1.7983	0.0361
32	1.8340	0.0357
33	1.8692	0.0353
34	1.9041	0.0348
35	1.9385	0.0345
36	1.9726	0.0341
37	2.0063	0.0337
38	2.0397	0.0334
39	2.0727	0.0330
40	2.1054	0.0327
41	2.1378	0.0324
42	2.1699	0.0321
43	2.2017	0.0318
44	2.2333	0.0315
45	2.2645	0.0313
46	2.2955	0.0310
47	2.3262	0.0307
48	2.3567	0.0305
49	2.3870	0.0302
50	2.4170	0.0300
51	2.4468	0.0298
52	2.4763	0.0296
53	2.5057	0.0293
54	2.5348	0.0291
55	2.5637	0.0289
56	2.5925	0.0287
57	2.6210	0.0285
58	2.6494	0.0283
59	2.6775	0.0282
60	2.7055	0.0280
61	2.7333	0.0278
62	2.7609	0.0276
63	2.7884	0.0275
64	2.8157	0.0273
65	2.8428	0.0271
66	2.8698	0.0270
67	2.8966	0.0268
68	2.9232	0.0267
69	2.9498	0.0265
70	2.9761	0.0264
71	3.0023	0.0262
72	3.0284	0.0261
73	3.0550	0.0266
74	3.0815	0.0265
75	3.1078	0.0263
76	3.1340	0.0262
77	3.1601	0.0261
78	3.1860	0.0259
79	3.2119	0.0258

80	3.2376	0.0257
81	3.2632	0.0256
82	3.2886	0.0255
83	3.3140	0.0254
84	3.3392	0.0253
85	3.3644	0.0251
86	3.3894	0.0250
87	3.4143	0.0249
88	3.4392	0.0248
89	3.4639	0.0247
90	3.4885	0.0246
91	3.5130	0.0245
92	3.5374	0.0244
93	3.5618	0.0243
94	3.5860	0.0242
95	3.6101	0.0241
96	3.6341	0.0240
97	3.6581	0.0239
98	3.6820	0.0239
99	3.7057	0.0238
100	3.7294	0.0237
101	3.7530	0.0236
102	3.7765	0.0235
103	3.7999	0.0234
104	3.8233	0.0233
105	3.8465	0.0233
106	3.8697	0.0232
107	3.8928	0.0231
108	3.9158	0.0230
109	3.9388	0.0229
110	3.9616	0.0229
111	3.9844	0.0228
112	4.0071	0.0227
113	4.0298	0.0226
114	4.0523	0.0226
115	4.0748	0.0225
116	4.0972	0.0224
117	4.1196	0.0224
118	4.1419	0.0223
119	4.1641	0.0222
120	4.1862	0.0221
121	4.2083	0.0221
122	4.2303	0.0220
123	4.2523	0.0219
124	4.2741	0.0219
125	4.2960	0.0218
126	4.3177	0.0218
127	4.3394	0.0217
128	4.3610	0.0216
129	4.3826	0.0216
130	4.4041	0.0215
131	4.4255	0.0214
132	4.4469	0.0214
133	4.4682	0.0213
134	4.4895	0.0213
135	4.5107	0.0212
136	4.5318	0.0211
137	4.5529	0.0211
138	4.5740	0.0210
139	4.5949	0.0210
140	4.6159	0.0209
141	4.6367	0.0209
142	4.6576	0.0208
143	4.6783	0.0208
144	4.6990	0.0207
145	4.7197	0.0207
146	4.7403	0.0206
147	4.7608	0.0206
148	4.7813	0.0205
149	4.8018	0.0205
150	4.8222	0.0204

151	4.8425	0.0204
152	4.8628	0.0203
153	4.8831	0.0203
154	4.9033	0.0202
155	4.9234	0.0202
156	4.9436	0.0201
157	4.9636	0.0201
158	4.9836	0.0200
159	5.0036	0.0200
160	5.0235	0.0199
161	5.0434	0.0199
162	5.0632	0.0198
163	5.0830	0.0198
164	5.1028	0.0197
165	5.1225	0.0197
166	5.1421	0.0197
167	5.1617	0.0196
168	5.1813	0.0196
169	5.2008	0.0195
170	5.2203	0.0195
171	5.2397	0.0194
172	5.2591	0.0194
173	5.2785	0.0194
174	5.2978	0.0193
175	5.3171	0.0193
176	5.3363	0.0192
177	5.3555	0.0192
178	5.3747	0.0192
179	5.3938	0.0191
180	5.4129	0.0191
181	5.4319	0.0190
182	5.4509	0.0190
183	5.4699	0.0190
184	5.4888	0.0189
185	5.5077	0.0189
186	5.5265	0.0189
187	5.5454	0.0188
188	5.5641	0.0188
189	5.5829	0.0187
190	5.6016	0.0187
191	5.6202	0.0187
192	5.6389	0.0186
193	5.6575	0.0186
194	5.6760	0.0186
195	5.6946	0.0185
196	5.7131	0.0185
197	5.7315	0.0185
198	5.7499	0.0184
199	5.7683	0.0184
200	5.7867	0.0184
201	5.8050	0.0183
202	5.8233	0.0183
203	5.8415	0.0183
204	5.8598	0.0182
205	5.8779	0.0182
206	5.8961	0.0182
207	5.9142	0.0181
208	5.9323	0.0181
209	5.9504	0.0181
210	5.9684	0.0180
211	5.9864	0.0180
212	6.0044	0.0180
213	6.0223	0.0179
214	6.0402	0.0179
215	6.0581	0.0179
216	6.0759	0.0178
217	6.0937	0.0178
218	6.1115	0.0178
219	6.1293	0.0178
220	6.1470	0.0177
221	6.1647	0.0177

222	6.1824	0.0177
223	6.2000	0.0176
224	6.2176	0.0176
225	6.2352	0.0176
226	6.2527	0.0175
227	6.2703	0.0175
228	6.2877	0.0175
229	6.3052	0.0175
230	6.3226	0.0174
231	6.3401	0.0174
232	6.3574	0.0174
233	6.3748	0.0174
234	6.3921	0.0173
235	6.4094	0.0173
236	6.4267	0.0173
237	6.4439	0.0172
238	6.4612	0.0172
239	6.4783	0.0172
240	6.4955	0.0172
241	6.5127	0.0171
242	6.5298	0.0171
243	6.5469	0.0171
244	6.5639	0.0171
245	6.5810	0.0170
246	6.5980	0.0170
247	6.6150	0.0170
248	6.6319	0.0170
249	6.6488	0.0169
250	6.6658	0.0169
251	6.6826	0.0169
252	6.6995	0.0169
253	6.7163	0.0168
254	6.7332	0.0168
255	6.7499	0.0168
256	6.7667	0.0168
257	6.7835	0.0167
258	6.8002	0.0167
259	6.8169	0.0167
260	6.8335	0.0167
261	6.8502	0.0166
262	6.8668	0.0166
263	6.8834	0.0166
264	6.9000	0.0166
265	6.9165	0.0166
266	6.9331	0.0165
267	6.9496	0.0165
268	6.9661	0.0165
269	6.9825	0.0165
270	6.9990	0.0164
271	7.0154	0.0164
272	7.0318	0.0164
273	7.0481	0.0164
274	7.0645	0.0164
275	7.0808	0.0163
276	7.0971	0.0163
277	7.1134	0.0163
278	7.1297	0.0163
279	7.1459	0.0162
280	7.1622	0.0162
281	7.1784	0.0162
282	7.1945	0.0162
283	7.2107	0.0162
284	7.2268	0.0161
285	7.2429	0.0161
286	7.2590	0.0161
287	7.2751	0.0161
288	7.2912	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)

1	0.0161	0.0079	0.0082
2	0.0161	0.0079	0.0082
3	0.0161	0.0079	0.0082
4	0.0161	0.0079	0.0082
5	0.0162	0.0079	0.0083
6	0.0162	0.0079	0.0083
7	0.0162	0.0080	0.0083
8	0.0163	0.0080	0.0083
9	0.0163	0.0080	0.0083
10	0.0163	0.0080	0.0083
11	0.0164	0.0080	0.0084
12	0.0164	0.0080	0.0084
13	0.0164	0.0080	0.0084
14	0.0165	0.0081	0.0084
15	0.0165	0.0081	0.0084
16	0.0165	0.0081	0.0084
17	0.0166	0.0081	0.0085
18	0.0166	0.0081	0.0085
19	0.0166	0.0081	0.0085
20	0.0167	0.0082	0.0085
21	0.0167	0.0082	0.0085
22	0.0167	0.0082	0.0085
23	0.0168	0.0082	0.0086
24	0.0168	0.0082	0.0086
25	0.0169	0.0083	0.0086
26	0.0169	0.0083	0.0086
27	0.0169	0.0083	0.0086
28	0.0170	0.0083	0.0087
29	0.0170	0.0083	0.0087
30	0.0170	0.0083	0.0087
31	0.0171	0.0084	0.0087
32	0.0171	0.0084	0.0087
33	0.0172	0.0084	0.0088
34	0.0172	0.0084	0.0088
35	0.0172	0.0084	0.0088
36	0.0173	0.0085	0.0088
37	0.0173	0.0085	0.0088
38	0.0174	0.0085	0.0089
39	0.0174	0.0085	0.0089
40	0.0174	0.0085	0.0089
41	0.0175	0.0086	0.0089
42	0.0175	0.0086	0.0089
43	0.0176	0.0086	0.0090
44	0.0176	0.0086	0.0090
45	0.0177	0.0086	0.0090
46	0.0177	0.0087	0.0090
47	0.0178	0.0087	0.0091
48	0.0178	0.0087	0.0091
49	0.0178	0.0087	0.0091
50	0.0179	0.0087	0.0091
51	0.0179	0.0088	0.0092
52	0.0180	0.0088	0.0092
53	0.0180	0.0088	0.0092
54	0.0181	0.0088	0.0092
55	0.0181	0.0089	0.0093
56	0.0182	0.0089	0.0093
57	0.0182	0.0089	0.0093
58	0.0183	0.0089	0.0093
59	0.0183	0.0090	0.0094
60	0.0184	0.0090	0.0094
61	0.0184	0.0090	0.0094
62	0.0185	0.0090	0.0094
63	0.0185	0.0091	0.0095
64	0.0186	0.0091	0.0095
65	0.0186	0.0091	0.0095
66	0.0187	0.0091	0.0095
67	0.0187	0.0092	0.0096
68	0.0188	0.0092	0.0096
69	0.0189	0.0092	0.0096
70	0.0189	0.0092	0.0096

71	0.0190	0.0093	0.0097
72	0.0190	0.0093	0.0097
73	0.0191	0.0093	0.0097
74	0.0191	0.0094	0.0098
75	0.0192	0.0094	0.0098
76	0.0192	0.0094	0.0098
77	0.0193	0.0095	0.0099
78	0.0194	0.0095	0.0099
79	0.0194	0.0095	0.0099
80	0.0195	0.0095	0.0099
81	0.0196	0.0096	0.0100
82	0.0196	0.0096	0.0100
83	0.0197	0.0096	0.0101
84	0.0197	0.0097	0.0101
85	0.0198	0.0097	0.0101
86	0.0199	0.0097	0.0101
87	0.0200	0.0098	0.0102
88	0.0200	0.0098	0.0102
89	0.0201	0.0098	0.0103
90	0.0202	0.0099	0.0103
91	0.0203	0.0099	0.0103
92	0.0203	0.0099	0.0104
93	0.0204	0.0100	0.0104
94	0.0205	0.0100	0.0104
95	0.0206	0.0101	0.0105
96	0.0206	0.0101	0.0105
97	0.0207	0.0101	0.0106
98	0.0208	0.0102	0.0106
99	0.0209	0.0102	0.0107
100	0.0209	0.0102	0.0107
101	0.0210	0.0103	0.0107
102	0.0211	0.0103	0.0108
103	0.0212	0.0104	0.0108
104	0.0213	0.0104	0.0109
105	0.0214	0.0105	0.0109
106	0.0214	0.0105	0.0109
107	0.0216	0.0106	0.0110
108	0.0216	0.0106	0.0110
109	0.0218	0.0106	0.0111
110	0.0218	0.0107	0.0111
111	0.0219	0.0107	0.0112
112	0.0220	0.0108	0.0112
113	0.0221	0.0108	0.0113
114	0.0222	0.0109	0.0113
115	0.0224	0.0109	0.0114
116	0.0224	0.0110	0.0114
117	0.0226	0.0110	0.0115
118	0.0226	0.0111	0.0116
119	0.0228	0.0112	0.0116
120	0.0229	0.0112	0.0117
121	0.0230	0.0113	0.0118
122	0.0231	0.0113	0.0118
123	0.0233	0.0114	0.0119
124	0.0233	0.0114	0.0119
125	0.0235	0.0115	0.0120
126	0.0236	0.0115	0.0120
127	0.0238	0.0116	0.0121
128	0.0239	0.0117	0.0122
129	0.0240	0.0118	0.0123
130	0.0241	0.0118	0.0123
131	0.0243	0.0119	0.0124
132	0.0244	0.0120	0.0125
133	0.0246	0.0121	0.0126
134	0.0247	0.0121	0.0126
135	0.0249	0.0122	0.0127
136	0.0250	0.0123	0.0128
137	0.0253	0.0124	0.0129
138	0.0254	0.0124	0.0129
139	0.0256	0.0125	0.0131
140	0.0257	0.0126	0.0131
141	0.0259	0.0127	0.0132

142	0.0261	0.0128	0.0133
143	0.0263	0.0129	0.0134
144	0.0265	0.0130	0.0135
145	0.0261	0.0128	0.0133
146	0.0262	0.0128	0.0134
147	0.0265	0.0130	0.0135
148	0.0267	0.0131	0.0136
149	0.0270	0.0132	0.0138
150	0.0271	0.0133	0.0138
151	0.0275	0.0134	0.0140
152	0.0276	0.0135	0.0141
153	0.0280	0.0137	0.0143
154	0.0282	0.0138	0.0144
155	0.0285	0.0140	0.0146
156	0.0287	0.0141	0.0147
157	0.0291	0.0143	0.0149
158	0.0293	0.0144	0.0150
159	0.0298	0.0146	0.0152
160	0.0300	0.0147	0.0153
161	0.0305	0.0149	0.0156
162	0.0307	0.0150	0.0157
163	0.0313	0.0153	0.0160
164	0.0315	0.0154	0.0161
165	0.0321	0.0157	0.0164
166	0.0324	0.0159	0.0165
167	0.0330	0.0162	0.0169
168	0.0334	0.0163	0.0170
169	0.0341	0.0167	0.0174
170	0.0345	0.0169	0.0176
171	0.0353	0.0173	0.0180
172	0.0357	0.0175	0.0182
173	0.0366	0.0179	0.0187
174	0.0371	0.0181	0.0189
175	0.0381	0.0187	0.0195
176	0.0387	0.0189	0.0197
177	0.0399	0.0195	0.0204
178	0.0406	0.0199	0.0207
179	0.0420	0.0206	0.0215
180	0.0428	0.0210	0.0219
181	0.0446	0.0219	0.0228
182	0.0457	0.0223	0.0233
183	0.0480	0.0235	0.0245
184	0.0493	0.0241	0.0252
185	0.0258	0.0126	0.0131
186	0.0274	0.0134	0.0140
187	0.0318	0.0156	0.0163
188	0.0348	0.0170	0.0177
189	0.0432	0.0212	0.0221
190	0.0498	0.0244	0.0254
191	0.0755	0.0370	0.0386
192	0.1096	0.0460	0.0636
193	0.4743	0.0460	0.4283
194	0.0594	0.0291	0.0303
195	0.0384	0.0188	0.0196
196	0.0294	0.0144	0.0150
197	0.0508	0.0248	0.0259
198	0.0468	0.0229	0.0239
199	0.0437	0.0214	0.0223
200	0.0413	0.0202	0.0211
201	0.0393	0.0192	0.0200
202	0.0376	0.0184	0.0192
203	0.0361	0.0177	0.0184
204	0.0348	0.0171	0.0178
205	0.0337	0.0165	0.0172
206	0.0327	0.0160	0.0167
207	0.0318	0.0156	0.0162
208	0.0310	0.0152	0.0158
209	0.0302	0.0148	0.0154
210	0.0296	0.0145	0.0151
211	0.0289	0.0142	0.0148
212	0.0283	0.0139	0.0145

213	0.0278	0.0136	0.0142
214	0.0273	0.0134	0.0139
215	0.0268	0.0131	0.0137
216	0.0264	0.0129	0.0135
217	0.0266	0.0130	0.0136
218	0.0262	0.0128	0.0134
219	0.0258	0.0126	0.0132
220	0.0255	0.0125	0.0130
221	0.0251	0.0123	0.0128
222	0.0248	0.0122	0.0127
223	0.0245	0.0120	0.0125
224	0.0242	0.0119	0.0124
225	0.0239	0.0117	0.0122
226	0.0237	0.0116	0.0121
227	0.0234	0.0115	0.0120
228	0.0232	0.0113	0.0118
229	0.0229	0.0112	0.0117
230	0.0227	0.0111	0.0116
231	0.0225	0.0110	0.0115
232	0.0223	0.0109	0.0114
233	0.0221	0.0108	0.0113
234	0.0219	0.0107	0.0112
235	0.0217	0.0106	0.0111
236	0.0215	0.0105	0.0110
237	0.0213	0.0104	0.0109
238	0.0211	0.0104	0.0108
239	0.0210	0.0103	0.0107
240	0.0208	0.0102	0.0106
241	0.0207	0.0101	0.0105
242	0.0205	0.0100	0.0105
243	0.0204	0.0100	0.0104
244	0.0202	0.0099	0.0103
245	0.0201	0.0098	0.0102
246	0.0199	0.0098	0.0102
247	0.0198	0.0097	0.0101
248	0.0197	0.0096	0.0100
249	0.0195	0.0096	0.0100
250	0.0194	0.0095	0.0099
251	0.0193	0.0094	0.0098
252	0.0192	0.0094	0.0098
253	0.0190	0.0093	0.0097
254	0.0189	0.0093	0.0097
255	0.0188	0.0092	0.0096
256	0.0187	0.0092	0.0095
257	0.0186	0.0091	0.0095
258	0.0185	0.0091	0.0094
259	0.0184	0.0090	0.0094
260	0.0183	0.0090	0.0093
261	0.0182	0.0089	0.0093
262	0.0181	0.0089	0.0092
263	0.0180	0.0088	0.0092
264	0.0179	0.0088	0.0091
265	0.0178	0.0087	0.0091
266	0.0177	0.0087	0.0090
267	0.0176	0.0086	0.0090
268	0.0175	0.0086	0.0090
269	0.0175	0.0085	0.0089
270	0.0174	0.0085	0.0089
271	0.0173	0.0085	0.0088
272	0.0172	0.0084	0.0088
273	0.0171	0.0084	0.0087
274	0.0171	0.0084	0.0087
275	0.0170	0.0083	0.0087
276	0.0169	0.0083	0.0086
277	0.0168	0.0082	0.0086
278	0.0168	0.0082	0.0086
279	0.0167	0.0082	0.0085
280	0.0166	0.0081	0.0085
281	0.0166	0.0081	0.0085
282	0.0165	0.0081	0.0084
283	0.0164	0.0080	0.0084

```
      284              0.0164           0.0080              0.0083
      285              0.0163           0.0080              0.0083
      286              0.0162           0.0079              0.0083
      287              0.0162           0.0079              0.0082
      288              0.0161           0.0079              0.0082
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.38(In)
      Total effective rainfall =      3.92(In)
      Peak flow rate in flood hydrograph =     18.36(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0002      0.03  Q          |          |          |          |
  0+10       0.0012      0.14  Q          |          |          |          |
  0+15       0.0041      0.43  Q          |          |          |          |
  0+20       0.0086      0.65  VQ         |          |          |          |
  0+25       0.0137      0.74  VQ         |          |          |          |
  0+30       0.0192      0.81  VQ         |          |          |          |
  0+35       0.0251      0.85  VQ         |          |          |          |
  0+40       0.0312      0.89  VQ         |          |          |          |
  0+45       0.0375      0.91  VQ         |          |          |          |
  0+50       0.0439      0.93  VQ         |          |          |          |
  0+55       0.0503      0.94  VQ         |          |          |          |
  1+ 0       0.0568      0.94  VQ         |          |          |          |
  1+ 5       0.0634      0.95  VQ         |          |          |          |
  1+10       0.0699      0.95  VQ         |          |          |          |
  1+15       0.0765      0.96  VQ         |          |          |          |
  1+20       0.0832      0.96  |Q         |          |          |          |
  1+25       0.0898      0.97  |Q         |          |          |          |
  1+30       0.0965      0.97  |Q         |          |          |          |
  1+35       0.1032      0.97  |Q         |          |          |          |
  1+40       0.1099      0.97  |Q         |          |          |          |
  1+45       0.1166      0.98  |Q         |          |          |          |
  1+50       0.1233      0.98  |Q         |          |          |          |
  1+55       0.1301      0.98  |Q         |          |          |          |
  2+ 0       0.1369      0.98  |Q         |          |          |          |
  2+ 5       0.1436      0.98  |Q         |          |          |          |
  2+10       0.1504      0.99  |Q         |          |          |          |
  2+15       0.1572      0.99  |QV        |          |          |          |
  2+20       0.1640      0.99  |QV        |          |          |          |
  2+25       0.1709      0.99  |QV        |          |          |          |
  2+30       0.1777      0.99  |QV        |          |          |          |
  2+35       0.1846      1.00  |QV        |          |          |          |
  2+40       0.1915      1.00  |QV        |          |          |          |
  2+45       0.1984      1.00  | Q        |          |          |          |
  2+50       0.2053      1.00  | Q        |          |          |          |
  2+55       0.2122      1.01  | Q        |          |          |          |
  3+ 0       0.2191      1.01  | Q        |          |          |          |
  3+ 5       0.2261      1.01  | Q        |          |          |          |
  3+10       0.2331      1.01  | QV       |          |          |          |
  3+15       0.2400      1.01  | QV       |          |          |          |
  3+20       0.2470      1.02  | QV       |          |          |          |
  3+25       0.2541      1.02  | QV       |          |          |          |
  3+30       0.2611      1.02  | QV       |          |          |          |
  3+35       0.2682      1.02  | QV       |          |          |          |
  3+40       0.2752      1.03  | QV       |          |          |          |
  3+45       0.2823      1.03  | QV       |          |          |          |
  3+50       0.2894      1.03  | QV       |          |          |          |
  3+55       0.2966      1.03  | QV       |          |          |          |
  4+ 0       0.3037      1.04  | QV       |          |          |          |
  4+ 5       0.3109      1.04  | Q V      |          |          |          |
  4+10       0.3180      1.04  | Q V      |          |          |          |
  4+15       0.3252      1.04  | Q V      |          |          |          |
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 4+20      0.3324      1.05  | Q V     |         |         |         |
 4+25      0.3397      1.05  | Q V     |         |         |         |
 4+30      0.3469      1.05  | Q V     |         |         |         |
 4+35      0.3542      1.06  | Q V     |         |         |         |
 4+40      0.3615      1.06  | Q V     |         |         |         |
 4+45      0.3688      1.06  | Q V     |         |         |         |
 4+50      0.3761      1.06  | Q V     |         |         |         |
 4+55      0.3835      1.07  | Q V     |         |         |         |
 5+ 0      0.3908      1.07  | Q  V    |         |         |         |
 5+ 5      0.3982      1.07  | Q  V    |         |         |         |
 5+10      0.4056      1.08  | Q  V    |         |         |         |
 5+15      0.4130      1.08  | Q  V    |         |         |         |
 5+20      0.4205      1.08  | Q  V    |         |         |         |
 5+25      0.4280      1.08  | Q  V    |         |         |         |
 5+30      0.4355      1.09  | Q  V    |         |         |         |
 5+35      0.4430      1.09  | Q  V    |         |         |         |
 5+40      0.4505      1.09  | Q  V    |         |         |         |
 5+45      0.4580      1.10  | Q  V    |         |         |         |
 5+50      0.4656      1.10  | Q  V    |         |         |         |
 5+55      0.4732      1.10  | Q   V   |         |         |         |
 6+ 0      0.4808      1.11  | Q   V   |         |         |         |
 6+ 5      0.4885      1.11  | Q   V   |         |         |         |
 6+10      0.4961      1.11  | Q   V   |         |         |         |
 6+15      0.5038      1.12  | Q   V   |         |         |         |
 6+20      0.5115      1.12  | Q   V   |         |         |         |
 6+25      0.5193      1.12  | Q   V   |         |         |         |
 6+30      0.5270      1.13  | Q   V   |         |         |         |
 6+35      0.5348      1.13  | Q   V   |         |         |         |
 6+40      0.5426      1.13  | Q   V   |         |         |         |
 6+45      0.5505      1.14  | Q    V  |         |         |         |
 6+50      0.5583      1.14  | Q    V  |         |         |         |
 6+55      0.5662      1.14  | Q    V  |         |         |         |
 7+ 0      0.5741      1.15  | Q    V  |         |         |         |
 7+ 5      0.5820      1.15  | Q    V  |         |         |         |
 7+10      0.5900      1.16  | Q    V  |         |         |         |
 7+15      0.5980      1.16  | Q    V  |         |         |         |
 7+20      0.6060      1.16  | Q    V  |         |         |         |
 7+25      0.6140      1.17  | Q    V  |         |         |         |
 7+30      0.6221      1.17  | Q     V |         |         |         |
 7+35      0.6302      1.18  | Q     V |         |         |         |
 7+40      0.6383      1.18  | Q     V |         |         |         |
 7+45      0.6465      1.18  | Q     V |         |         |         |
 7+50      0.6547      1.19  | Q     V |         |         |         |
 7+55      0.6629      1.19  | Q     V |         |         |         |
 8+ 0      0.6711      1.20  | Q     V |         |         |         |
 8+ 5      0.6794      1.20  | Q     V |         |         |         |
 8+10      0.6877      1.21  | Q     V |         |         |         |
 8+15      0.6960      1.21  | Q     V |         |         |         |
 8+20      0.7044      1.21  | Q      V|         |         |         |
 8+25      0.7128      1.22  | Q      V|         |         |         |
 8+30      0.7212      1.22  | Q      V|         |         |         |
 8+35      0.7297      1.23  | Q      V|         |         |         |
 8+40      0.7382      1.23  | Q      V|         |         |         |
 8+45      0.7467      1.24  | Q      V|         |         |         |
 8+50      0.7553      1.24  | Q      V|         |         |         |
 8+55      0.7639      1.25  | Q      V|         |         |         |
 9+ 0      0.7725      1.25  | Q      V|         |         |         |
 9+ 5      0.7812      1.26  | Q       V         |         |         |
 9+10      0.7899      1.26  | Q       V         |         |         |
 9+15      0.7987      1.27  | Q       V         |         |         |
 9+20      0.8075      1.28  | Q       V         |         |         |
 9+25      0.8163      1.28  | Q       V         |         |         |
 9+30      0.8251      1.29  | Q       V         |         |         |
 9+35      0.8341      1.29  | Q       V         |         |         |
 9+40      0.8430      1.30  | Q       V         |         |         |
 9+45      0.8520      1.30  | Q       V         |         |         |
 9+50      0.8610      1.31  | Q       |V        |         |         |
 9+55      0.8701      1.32  | Q       |V        |         |         |
10+ 0      0.8792      1.32  | Q       |V        |         |         |
10+ 5      0.8884      1.33  | Q       |V        |         |         |
10+10      0.8976      1.34  | Q       |V        |         |         |
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10+15      0.9068      1.34  | Q       |V        |         |         |
10+20      0.9161      1.35  | Q       |V        |         |         |
10+25      0.9254      1.36  | Q       |V        |         |         |
10+30      0.9348      1.36  | Q       | V       |         |         |
10+35      0.9443      1.37  | Q       | V       |         |         |
10+40      0.9538      1.38  | Q       | V       |         |         |
10+45      0.9633      1.39  | Q       | V       |         |         |
10+50      0.9729      1.39  | Q       | V       |         |         |
10+55      0.9826      1.40  | Q       | V       |         |         |
11+ 0      0.9923      1.41  | Q       | V       |         |         |
11+ 5      1.0020      1.42  | Q       | V       |         |         |
11+10      1.0118      1.43  | Q       |  V      |         |         |
11+15      1.0217      1.43  | Q       |  V      |         |         |
11+20      1.0317      1.44  | Q       |  V      |         |         |
11+25      1.0417      1.45  | Q       |  V      |         |         |
11+30      1.0517      1.46  | Q       |  V      |         |         |
11+35      1.0618      1.47  | Q       |  V      |         |         |
11+40      1.0720      1.48  | Q       |  V      |         |         |
11+45      1.0823      1.49  | Q       |  V      |         |         |
11+50      1.0926      1.50  | Q       |   V     |         |         |
11+55      1.1030      1.51  |  Q      |   V     |         |         |
12+ 0      1.1135      1.52  |  Q      |   V     |         |         |
12+ 5      1.1240      1.53  |  Q      |   V     |         |         |
12+10      1.1346      1.54  |  Q      |   V     |         |         |
12+15      1.1452      1.54  |  Q      |   V     |         |         |
12+20      1.1558      1.54  |  Q      |   V     |         |         |
12+25      1.1665      1.55  |  Q      |    V    |         |         |
12+30      1.1772      1.56  |  Q      |    V    |         |         |
12+35      1.1880      1.57  |  Q      |    V    |         |         |
12+40      1.1989      1.58  |  Q      |    V    |         |         |
12+45      1.2099      1.59  |  Q      |    V    |         |         |
12+50      1.2210      1.61  |  Q      |    V    |         |         |
12+55      1.2321      1.62  |  Q      |    V    |         |         |
13+ 0      1.2434      1.64  |  Q      |     V   |         |         |
13+ 5      1.2548      1.65  |  Q      |     V   |         |         |
13+10      1.2663      1.67  |  Q      |     V   |         |         |
13+15      1.2779      1.69  |  Q      |     V   |         |         |
13+20      1.2897      1.70  |  Q      |     V   |         |         |
13+25      1.3015      1.72  |  Q      |     V   |         |         |
13+30      1.3135      1.74  |  Q      |     V   |         |         |
13+35      1.3257      1.76  |  Q      |      V  |         |         |
13+40      1.3380      1.78  |  Q      |      V  |         |         |
13+45      1.3504      1.81  |  Q      |      V  |         |         |
13+50      1.3630      1.83  |  Q      |      V  |         |         |
13+55      1.3757      1.85  |  Q      |      V  |         |         |
14+ 0      1.3887      1.88  |  Q      |      V  |         |         |
14+ 5      1.4018      1.90  |  Q      |       V |         |         |
14+10      1.4151      1.93  |  Q      |       V |         |         |
14+15      1.4286      1.96  |  Q      |       V |         |         |
14+20      1.4423      1.99  |  Q      |       V |         |         |
14+25      1.4562      2.02  |   Q     |       V |         |         |
14+30      1.4704      2.06  |   Q     |       V |         |         |
14+35      1.4848      2.10  |   Q     |        V|         |         |
14+40      1.4995      2.14  |   Q     |        V|         |         |
14+45      1.5146      2.18  |   Q     |        V|         |         |
14+50      1.5299      2.22  |   Q     |        V|         |         |
14+55      1.5455      2.27  |   Q     |        V|         |         |
15+ 0      1.5616      2.33  |   Q     |         V         |         |
15+ 5      1.5780      2.39  |   Q     |         V         |         |
15+10      1.5949      2.45  |   Q     |         V         |         |
15+15      1.6123      2.52  |    Q    |         V         |         |
15+20      1.6302      2.60  |    Q    |         |V        |         |
15+25      1.6484      2.65  |    Q    |         |V        |         |
15+30      1.6661      2.57  |    Q    |         |V        |         |
15+35      1.6812      2.20  |   Q     |         |V        |         |
15+40      1.6949      1.98  |  Q      |         |V        |         |
15+45      1.7087      2.00  |   Q     |         | V       |         |
15+50      1.7232      2.11  |   Q     |         | V       |         |
15+55      1.7396      2.37  |   Q     |         | V       |         |
16+ 0      1.7593      2.87  |    Q    |         | V       |         |
16+ 5      1.7945      5.11  |         Q         |  V      |         |
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16+10       1.8625      9.87  |          |         Q|  V       |          |
16+15       1.9889     18.36  |          |          |    V     |      Q   |
16+20       2.0852     13.98  |          |          |     VQ   |          |
16+25       2.1380      7.67  |          |     Q    |       V  |          |
16+30       2.1779      5.79  |          |Q         |        V |          |
16+35       2.2121      4.98  |          |  Q       |        V |          |
16+40       2.2424      4.39  |          |    Q     |        V |          |
16+45       2.2686      3.80  |          |      Q   |         V|          |
16+50       2.2914      3.31  |          |       Q  |         V|          |
16+55       2.3110      2.85  |          |     Q    |         V|          |
17+ 0       2.3286      2.56  |          |     Q    |         V|          |
17+ 5       2.3454      2.44  |          |    Q     |          V          |
17+10       2.3613      2.31  |          |    Q     |          V          |
17+15       2.3767      2.24  |          |    Q     |          V          |
17+20       2.3915      2.15  |          |    Q     |          V          |
17+25       2.4055      2.03  |          |    Q     |          V          |
17+30       2.4189      1.95  |          |  Q       |          |V         |
17+35       2.4317      1.85  |          |  Q       |          |V         |
17+40       2.4441      1.81  |          |  Q       |          |V         |
17+45       2.4563      1.76  |          |  Q       |          |V         |
17+50       2.4681      1.72  |          |  Q       |          |V         |
17+55       2.4798      1.69  |          |  Q       |          |V         |
18+ 0       2.4911      1.65  |          |  Q       |          | V        |
18+ 5       2.5023      1.62  |          |  Q       |          | V        |
18+10       2.5133      1.60  |          |  Q       |          | V        |
18+15       2.5242      1.58  |          |  Q       |          | V        |
18+20       2.5350      1.56  |          |  Q       |          | V        |
18+25       2.5456      1.54  |          |  Q       |          | V        |
18+30       2.5561      1.52  |          |  Q       |          | V        |
18+35       2.5665      1.50  |          |  Q       |          |  V       |
18+40       2.5767      1.49  |          | Q        |          |  V       |
18+45       2.5868      1.47  |          | Q        |          |  V       |
18+50       2.5968      1.45  |          | Q        |          |  V       |
18+55       2.6067      1.43  |          | Q        |          |  V       |
19+ 0       2.6164      1.41  |          | Q        |          |  V       |
19+ 5       2.6260      1.40  |          | Q        |          |  V       |
19+10       2.6356      1.38  |          | Q        |          |  V       |
19+15       2.6450      1.37  |          | Q        |          |   V      |
19+20       2.6543      1.35  |          | Q        |          |   V      |
19+25       2.6636      1.34  |          | Q        |          |   V      |
19+30       2.6727      1.33  |          | Q        |          |   V      |
19+35       2.6818      1.32  |          | Q        |          |   V      |
19+40       2.6907      1.30  |          | Q        |          |   V      |
19+45       2.6996      1.29  |          | Q        |          |   V      |
19+50       2.7084      1.28  |          | Q        |          |   V      |
19+55       2.7172      1.27  |          | Q        |          |    V     |
20+ 0       2.7258      1.26  |          | Q        |          |    V     |
20+ 5       2.7344      1.25  |          | Q        |          |    V     |
20+10       2.7430      1.24  |          | Q        |          |    V     |
20+15       2.7514      1.23  |          | Q        |          |    V     |
20+20       2.7598      1.22  |          | Q        |          |    V     |
20+25       2.7681      1.21  |          | Q        |          |    V     |
20+30       2.7764      1.20  |          | Q        |          |    V     |
20+35       2.7846      1.19  |          | Q        |          |    V     |
20+40       2.7927      1.18  |          | Q        |          |    V     |
20+45       2.8008      1.17  |          | Q        |          |     V    |
20+50       2.8089      1.17  |          | Q        |          |     V    |
20+55       2.8168      1.16  |          | Q        |          |     V    |
21+ 0       2.8248      1.15  |          | Q        |          |     V    |
21+ 5       2.8326      1.14  |          | Q        |          |     V    |
21+10       2.8405      1.14  |          | Q        |          |     V    |
21+15       2.8482      1.13  |          | Q        |          |     V    |
21+20       2.8560      1.12  |          | Q        |          |     V    |
21+25       2.8636      1.12  |          | Q        |          |     V    |
21+30       2.8713      1.11  |          | Q        |          |     V    |
21+35       2.8789      1.10  |          | Q        |          |      V   |
21+40       2.8864      1.10  |          | Q        |          |      V   |
21+45       2.8939      1.09  |          | Q        |          |      V   |
21+50       2.9014      1.08  |          | Q        |          |      V   |
21+55       2.9088      1.08  |          | Q        |          |      V   |
22+ 0       2.9162      1.07  |          | Q        |          |      V   |
```

```
  22+ 5       2.9235      1.07  | Q       |         |         |      V  |
  22+10       2.9308      1.06  | Q       |         |         |      V  |
  22+15       2.9381      1.05  | Q       |         |         |      V  |
  22+20       2.9453      1.05  | Q       |         |         |      V  |
  22+25       2.9525      1.04  | Q       |         |         |       V |
  22+30       2.9596      1.04  | Q       |         |         |       V |
  22+35       2.9668      1.03  | Q       |         |         |       V |
  22+40       2.9738      1.03  | Q       |         |         |       V |
  22+45       2.9809      1.02  | Q       |         |         |       V |
  22+50       2.9879      1.02  | Q       |         |         |       V |
  22+55       2.9949      1.01  | Q       |         |         |       V |
  23+ 0       3.0018      1.01  | Q       |         |         |       V |
  23+ 5       3.0088      1.00  | Q       |         |         |       V |
  23+10       3.0157      1.00  | Q       |         |         |       V |
  23+15       3.0225      1.00  |Q        |         |         |       V |
  23+20       3.0293      0.99  |Q        |         |         |        V|
  23+25       3.0361      0.99  |Q        |         |         |        V|
  23+30       3.0429      0.98  |Q        |         |         |        V|
  23+35       3.0496      0.98  |Q        |         |         |        V|
  23+40       3.0564      0.97  |Q        |         |         |        V|
  23+45       3.0630      0.97  |Q        |         |         |        V|
  23+50       3.0697      0.97  |Q        |         |         |        V|
  23+55       3.0763      0.96  |Q        |         |         |        V|
  24+ 0       3.0829      0.96  |Q        |         |         |        V|
  24+ 5       3.0893      0.93  |Q        |         |         |        V|
  24+10       3.0949      0.81  |Q        |         |         |        V|
  24+15       3.0985      0.52  |Q        |         |         |        V|
  24+20       3.1005      0.30  Q         |         |         |        V|
  24+25       3.1020      0.21  Q         |         |         |        V|
  24+30       3.1030      0.14  Q         |         |         |        V|
  24+35       3.1036      0.10  Q         |         |         |        V|
  24+40       3.1041      0.06  Q         |         |         |        V|
  24+45       3.1044      0.04  Q         |         |         |        V|
  24+50       3.1045      0.03  Q         |         |         |        V|
  24+55       3.1047      0.02  Q         |         |         |        V|
  25+ 0       3.1048      0.01  Q         |         |         |        V|
  25+ 5       3.1048      0.01  Q         |         |         |        V|
  25+10       3.1049      0.01  Q         |         |         |        V|
  25+15       3.1049      0.00  Q         |         |         |        V|
  25+20       3.1049      0.00  Q         |         |         |        V|
  25+25       3.1049      0.00  Q         |         |         |         V
--------------------------------------------------------------------------
```

Area 'D' – 25 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'D'
25 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             9.52            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             9.52            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             9.52           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             9.52            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             9.52            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             9.52           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 68.7      68.7          9.52      1.000     0.553    1.000    0.553

Area-averaged adjusted loss rate Fm (In/Hr) =  0.553

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
9.52	1.000	68.7	68.7	4.56	0.580

Area-averaged catchment yield fraction, Y = 0.580
Area-averaged low loss fraction, Yb = 0.420
User entry of time of concentration = 0.262 (hours)

++

Watershed area = 9.52(Ac.)
Catchment Lag time = 0.210 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 39.7583
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.553(In/Hr)
Average low loss rate fraction (Yb) = 0.420 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 9.52(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.569(In)
30-minute factor = 1.000 Adjusted rainfall = 0.973(In)
1-hour factor = 1.000 Adjusted rainfall = 1.198(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

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

++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 115.13 (CFS))	
1	3.107	3.578
2	14.718	13.368
3	45.653	35.616
4	68.346	26.128
5	78.353	11.521
6	85.032	7.690
7	89.767	5.452
8	93.189	3.940
9	95.606	2.782
10	97.231	1.872
11	98.108	1.010
12	98.568	0.529
13	98.955	0.446
14	99.222	0.306
15	99.512	0.334
16	99.764	0.291
17	99.907	0.164
18	100.000	0.107

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5687	0.5687
2	0.7001	0.1314
3	0.7907	0.0906
4	0.8619	0.0713
5	0.9216	0.0597
6	0.9734	0.0518
7	1.0195	0.0461
8	1.0612	0.0417

9	1.0993	0.0382
10	1.1346	0.0353
11	1.1676	0.0329
12	1.1984	0.0309
13	1.2590	0.0606
14	1.3178	0.0588
15	1.3751	0.0572
16	1.4309	0.0558
17	1.4853	0.0545
18	1.5386	0.0532
19	1.5907	0.0521
20	1.6418	0.0511
21	1.6919	0.0501
22	1.7411	0.0492
23	1.7894	0.0483
24	1.8369	0.0475
25	1.8837	0.0468
26	1.9298	0.0461
27	1.9752	0.0454
28	2.0200	0.0448
29	2.0641	0.0442
30	2.1077	0.0436
31	2.1507	0.0430
32	2.1932	0.0425
33	2.2352	0.0420
34	2.2767	0.0415
35	2.3177	0.0410
36	2.3583	0.0406
37	2.3984	0.0401
38	2.4381	0.0397
39	2.4775	0.0393
40	2.5164	0.0389
41	2.5549	0.0386
42	2.5931	0.0382
43	2.6310	0.0379
44	2.6685	0.0375
45	2.7057	0.0372
46	2.7426	0.0369
47	2.7791	0.0366
48	2.8154	0.0363
49	2.8514	0.0360
50	2.8871	0.0357
51	2.9225	0.0354
52	2.9577	0.0352
53	2.9926	0.0349
54	3.0272	0.0346
55	3.0616	0.0344
56	3.0958	0.0342
57	3.1297	0.0339
58	3.1634	0.0337
59	3.1969	0.0335
60	3.2301	0.0333
61	3.2632	0.0330
62	3.2960	0.0328
63	3.3287	0.0326
64	3.3611	0.0324
65	3.3934	0.0322
66	3.4254	0.0321
67	3.4573	0.0319
68	3.4890	0.0317
69	3.5205	0.0315
70	3.5518	0.0313
71	3.5830	0.0312
72	3.6140	0.0310
73	3.6476	0.0336
74	3.6811	0.0335
75	3.7144	0.0333
76	3.7475	0.0332
77	3.7806	0.0330
78	3.8135	0.0329
79	3.8462	0.0328

80	3.8788	0.0326
81	3.9113	0.0325
82	3.9437	0.0323
83	3.9759	0.0322
84	4.0080	0.0321
85	4.0399	0.0320
86	4.0718	0.0318
87	4.1035	0.0317
88	4.1351	0.0316
89	4.1666	0.0315
90	4.1980	0.0314
91	4.2292	0.0313
92	4.2603	0.0311
93	4.2914	0.0310
94	4.3223	0.0309
95	4.3531	0.0308
96	4.3838	0.0307
97	4.4144	0.0306
98	4.4449	0.0305
99	4.4753	0.0304
100	4.5056	0.0303
101	4.5358	0.0302
102	4.5659	0.0301
103	4.5959	0.0300
104	4.6258	0.0299
105	4.6556	0.0298
106	4.6853	0.0297
107	4.7150	0.0296
108	4.7445	0.0295
109	4.7739	0.0294
110	4.8033	0.0294
111	4.8326	0.0293
112	4.8617	0.0292
113	4.8908	0.0291
114	4.9199	0.0290
115	4.9488	0.0289
116	4.9776	0.0288
117	5.0064	0.0288
118	5.0351	0.0287
119	5.0637	0.0286
120	5.0922	0.0285
121	5.1206	0.0284
122	5.1490	0.0284
123	5.1773	0.0283
124	5.2055	0.0282
125	5.2337	0.0281
126	5.2617	0.0281
127	5.2897	0.0280
128	5.3177	0.0279
129	5.3455	0.0279
130	5.3733	0.0278
131	5.4010	0.0277
132	5.4286	0.0276
133	5.4562	0.0276
134	5.4837	0.0275
135	5.5112	0.0274
136	5.5385	0.0274
137	5.5658	0.0273
138	5.5931	0.0272
139	5.6202	0.0272
140	5.6474	0.0271
141	5.6744	0.0270
142	5.7014	0.0270
143	5.7283	0.0269
144	5.7552	0.0269
145	5.7820	0.0268
146	5.8087	0.0267
147	5.8354	0.0267
148	5.8620	0.0266
149	5.8885	0.0266
150	5.9150	0.0265

151	5.9415	0.0264
152	5.9679	0.0264
153	5.9942	0.0263
154	6.0205	0.0263
155	6.0467	0.0262
156	6.0728	0.0262
157	6.0990	0.0261
158	6.1250	0.0260
159	6.1510	0.0260
160	6.1769	0.0259
161	6.2028	0.0259
162	6.2287	0.0258
163	6.2544	0.0258
164	6.2802	0.0257
165	6.3059	0.0257
166	6.3315	0.0256
167	6.3571	0.0256
168	6.3826	0.0255
169	6.4081	0.0255
170	6.4335	0.0254
171	6.4589	0.0254
172	6.4842	0.0253
173	6.5095	0.0253
174	6.5347	0.0252
175	6.5599	0.0252
176	6.5850	0.0251
177	6.6101	0.0251
178	6.6352	0.0250
179	6.6602	0.0250
180	6.6851	0.0250
181	6.7100	0.0249
182	6.7349	0.0249
183	6.7597	0.0248
184	6.7845	0.0248
185	6.8092	0.0247
186	6.8339	0.0247
187	6.8586	0.0246
188	6.8832	0.0246
189	6.9077	0.0246
190	6.9322	0.0245
191	6.9567	0.0245
192	6.9811	0.0244
193	7.0055	0.0244
194	7.0299	0.0243
195	7.0542	0.0243
196	7.0784	0.0243
197	7.1026	0.0242
198	7.1268	0.0242
199	7.1510	0.0241
200	7.1751	0.0241
201	7.1991	0.0241
202	7.2232	0.0240
203	7.2471	0.0240
204	7.2711	0.0239
205	7.2950	0.0239
206	7.3189	0.0239
207	7.3427	0.0238
208	7.3665	0.0238
209	7.3902	0.0238
210	7.4140	0.0237
211	7.4376	0.0237
212	7.4613	0.0236
213	7.4849	0.0236
214	7.5085	0.0236
215	7.5320	0.0235
216	7.5555	0.0235
217	7.5789	0.0235
218	7.6024	0.0234
219	7.6258	0.0234
220	7.6491	0.0234
221	7.6724	0.0233

222	7.6957	0.0233
223	7.7190	0.0233
224	7.7422	0.0232
225	7.7654	0.0232
226	7.7885	0.0232
227	7.8117	0.0231
228	7.8347	0.0231
229	7.8578	0.0231
230	7.8808	0.0230
231	7.9038	0.0230
232	7.9267	0.0230
233	7.9497	0.0229
234	7.9725	0.0229
235	7.9954	0.0229
236	8.0182	0.0228
237	8.0410	0.0228
238	8.0638	0.0228
239	8.0865	0.0227
240	8.1092	0.0227
241	8.1319	0.0227
242	8.1545	0.0226
243	8.1771	0.0226
244	8.1997	0.0226
245	8.2222	0.0225
246	8.2447	0.0225
247	8.2672	0.0225
248	8.2897	0.0225
249	8.3121	0.0224
250	8.3345	0.0224
251	8.3569	0.0224
252	8.3792	0.0223
253	8.4015	0.0223
254	8.4238	0.0223
255	8.4460	0.0222
256	8.4682	0.0222
257	8.4904	0.0222
258	8.5126	0.0222
259	8.5347	0.0221
260	8.5568	0.0221
261	8.5789	0.0221
262	8.6010	0.0221
263	8.6230	0.0220
264	8.6450	0.0220
265	8.6669	0.0220
266	8.6889	0.0219
267	8.7108	0.0219
268	8.7327	0.0219
269	8.7545	0.0219
270	8.7764	0.0218
271	8.7982	0.0218
272	8.8200	0.0218
273	8.8417	0.0218
274	8.8634	0.0217
275	8.8851	0.0217
276	8.9068	0.0217
277	8.9285	0.0216
278	8.9501	0.0216
279	8.9717	0.0216
280	8.9933	0.0216
281	9.0148	0.0215
282	9.0363	0.0215
283	9.0578	0.0215
284	9.0793	0.0215
285	9.1008	0.0214
286	9.1222	0.0214
287	9.1436	0.0214
288	9.1649	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)

1	0.0214	0.0090	0.0124
2	0.0214	0.0090	0.0124
3	0.0214	0.0090	0.0124
4	0.0215	0.0090	0.0125
5	0.0215	0.0090	0.0125
6	0.0215	0.0090	0.0125
7	0.0216	0.0091	0.0125
8	0.0216	0.0091	0.0125
9	0.0217	0.0091	0.0126
10	0.0217	0.0091	0.0126
11	0.0218	0.0091	0.0126
12	0.0218	0.0091	0.0126
13	0.0218	0.0092	0.0127
14	0.0219	0.0092	0.0127
15	0.0219	0.0092	0.0127
16	0.0219	0.0092	0.0127
17	0.0220	0.0092	0.0128
18	0.0220	0.0092	0.0128
19	0.0221	0.0093	0.0128
20	0.0221	0.0093	0.0128
21	0.0222	0.0093	0.0129
22	0.0222	0.0093	0.0129
23	0.0222	0.0093	0.0129
24	0.0223	0.0094	0.0129
25	0.0223	0.0094	0.0130
26	0.0224	0.0094	0.0130
27	0.0224	0.0094	0.0130
28	0.0225	0.0094	0.0130
29	0.0225	0.0094	0.0131
30	0.0225	0.0095	0.0131
31	0.0226	0.0095	0.0131
32	0.0226	0.0095	0.0131
33	0.0227	0.0095	0.0132
34	0.0227	0.0095	0.0132
35	0.0228	0.0096	0.0132
36	0.0228	0.0096	0.0132
37	0.0229	0.0096	0.0133
38	0.0229	0.0096	0.0133
39	0.0230	0.0096	0.0133
40	0.0230	0.0097	0.0134
41	0.0231	0.0097	0.0134
42	0.0231	0.0097	0.0134
43	0.0232	0.0097	0.0135
44	0.0232	0.0097	0.0135
45	0.0233	0.0098	0.0135
46	0.0233	0.0098	0.0135
47	0.0234	0.0098	0.0136
48	0.0234	0.0098	0.0136
49	0.0235	0.0099	0.0136
50	0.0235	0.0099	0.0137
51	0.0236	0.0099	0.0137
52	0.0236	0.0099	0.0137
53	0.0237	0.0100	0.0138
54	0.0238	0.0100	0.0138
55	0.0238	0.0100	0.0138
56	0.0239	0.0100	0.0139
57	0.0239	0.0101	0.0139
58	0.0240	0.0101	0.0139
59	0.0241	0.0101	0.0140
60	0.0241	0.0101	0.0140
61	0.0242	0.0101	0.0140
62	0.0242	0.0102	0.0141
63	0.0243	0.0102	0.0141
64	0.0243	0.0102	0.0141
65	0.0244	0.0103	0.0142
66	0.0245	0.0103	0.0142
67	0.0246	0.0103	0.0142
68	0.0246	0.0103	0.0143
69	0.0247	0.0104	0.0143
70	0.0247	0.0104	0.0143

71	0.0248	0.0104	0.0144
72	0.0249	0.0104	0.0144
73	0.0250	0.0105	0.0145
74	0.0250	0.0105	0.0145
75	0.0251	0.0105	0.0146
76	0.0251	0.0106	0.0146
77	0.0252	0.0106	0.0146
78	0.0253	0.0106	0.0147
79	0.0254	0.0107	0.0147
80	0.0254	0.0107	0.0148
81	0.0255	0.0107	0.0148
82	0.0256	0.0107	0.0148
83	0.0257	0.0108	0.0149
84	0.0257	0.0108	0.0149
85	0.0258	0.0108	0.0150
86	0.0259	0.0109	0.0150
87	0.0260	0.0109	0.0151
88	0.0260	0.0109	0.0151
89	0.0262	0.0110	0.0152
90	0.0262	0.0110	0.0152
91	0.0263	0.0111	0.0153
92	0.0264	0.0111	0.0153
93	0.0265	0.0111	0.0154
94	0.0266	0.0111	0.0154
95	0.0267	0.0112	0.0155
96	0.0267	0.0112	0.0155
97	0.0269	0.0113	0.0156
98	0.0269	0.0113	0.0156
99	0.0270	0.0114	0.0157
100	0.0271	0.0114	0.0157
101	0.0272	0.0114	0.0158
102	0.0273	0.0115	0.0158
103	0.0274	0.0115	0.0159
104	0.0275	0.0115	0.0160
105	0.0276	0.0116	0.0160
106	0.0277	0.0116	0.0161
107	0.0279	0.0117	0.0162
108	0.0279	0.0117	0.0162
109	0.0281	0.0118	0.0163
110	0.0281	0.0118	0.0163
111	0.0283	0.0119	0.0164
112	0.0284	0.0119	0.0165
113	0.0285	0.0120	0.0166
114	0.0286	0.0120	0.0166
115	0.0288	0.0121	0.0167
116	0.0288	0.0121	0.0167
117	0.0290	0.0122	0.0168
118	0.0291	0.0122	0.0169
119	0.0293	0.0123	0.0170
120	0.0294	0.0123	0.0170
121	0.0295	0.0124	0.0171
122	0.0296	0.0124	0.0172
123	0.0298	0.0125	0.0173
124	0.0299	0.0126	0.0174
125	0.0301	0.0126	0.0175
126	0.0302	0.0127	0.0175
127	0.0304	0.0128	0.0176
128	0.0305	0.0128	0.0177
129	0.0307	0.0129	0.0178
130	0.0308	0.0129	0.0179
131	0.0310	0.0130	0.0180
132	0.0311	0.0131	0.0181
133	0.0314	0.0132	0.0182
134	0.0315	0.0132	0.0183
135	0.0317	0.0133	0.0184
136	0.0318	0.0134	0.0185
137	0.0321	0.0135	0.0186
138	0.0322	0.0135	0.0187
139	0.0325	0.0136	0.0188
140	0.0326	0.0137	0.0189
141	0.0329	0.0138	0.0191

142	0.0330	0.0139	0.0192
143	0.0333	0.0140	0.0193
144	0.0335	0.0140	0.0194
145	0.0310	0.0130	0.0180
146	0.0312	0.0131	0.0181
147	0.0315	0.0132	0.0183
148	0.0317	0.0133	0.0184
149	0.0321	0.0135	0.0186
150	0.0322	0.0135	0.0187
151	0.0326	0.0137	0.0189
152	0.0328	0.0138	0.0191
153	0.0333	0.0140	0.0193
154	0.0335	0.0141	0.0194
155	0.0339	0.0142	0.0197
156	0.0342	0.0143	0.0198
157	0.0346	0.0145	0.0201
158	0.0349	0.0146	0.0203
159	0.0354	0.0149	0.0206
160	0.0357	0.0150	0.0207
161	0.0363	0.0152	0.0210
162	0.0366	0.0153	0.0212
163	0.0372	0.0156	0.0216
164	0.0375	0.0157	0.0218
165	0.0382	0.0160	0.0222
166	0.0386	0.0162	0.0224
167	0.0393	0.0165	0.0228
168	0.0397	0.0167	0.0230
169	0.0406	0.0170	0.0235
170	0.0410	0.0172	0.0238
171	0.0420	0.0176	0.0244
172	0.0425	0.0178	0.0247
173	0.0436	0.0183	0.0253
174	0.0442	0.0185	0.0256
175	0.0454	0.0191	0.0263
176	0.0461	0.0193	0.0267
177	0.0475	0.0200	0.0276
178	0.0483	0.0203	0.0281
179	0.0501	0.0210	0.0291
180	0.0511	0.0214	0.0296
181	0.0532	0.0223	0.0309
182	0.0545	0.0229	0.0316
183	0.0572	0.0240	0.0332
184	0.0588	0.0247	0.0341
185	0.0309	0.0130	0.0179
186	0.0329	0.0138	0.0191
187	0.0382	0.0160	0.0221
188	0.0417	0.0175	0.0242
189	0.0518	0.0217	0.0301
190	0.0597	0.0250	0.0346
191	0.0906	0.0380	0.0525
192	0.1314	0.0460	0.0854
193	0.5687	0.0460	0.5226
194	0.0713	0.0299	0.0414
195	0.0461	0.0193	0.0267
196	0.0353	0.0148	0.0205
197	0.0606	0.0254	0.0352
198	0.0558	0.0234	0.0324
199	0.0521	0.0219	0.0302
200	0.0492	0.0206	0.0285
201	0.0468	0.0196	0.0272
202	0.0448	0.0188	0.0260
203	0.0430	0.0181	0.0250
204	0.0415	0.0174	0.0241
205	0.0401	0.0168	0.0233
206	0.0389	0.0163	0.0226
207	0.0379	0.0159	0.0220
208	0.0369	0.0155	0.0214
209	0.0360	0.0151	0.0209
210	0.0352	0.0148	0.0204
211	0.0344	0.0144	0.0200
212	0.0337	0.0141	0.0196

213	0.0330	0.0139	0.0192
214	0.0324	0.0136	0.0188
215	0.0319	0.0134	0.0185
216	0.0313	0.0132	0.0182
217	0.0336	0.0141	0.0195
218	0.0332	0.0139	0.0192
219	0.0328	0.0137	0.0190
220	0.0323	0.0136	0.0188
221	0.0320	0.0134	0.0185
222	0.0316	0.0133	0.0183
223	0.0313	0.0131	0.0181
224	0.0309	0.0130	0.0179
225	0.0306	0.0128	0.0178
226	0.0303	0.0127	0.0176
227	0.0300	0.0126	0.0174
228	0.0297	0.0125	0.0172
229	0.0294	0.0124	0.0171
230	0.0292	0.0122	0.0169
231	0.0289	0.0121	0.0168
232	0.0287	0.0120	0.0166
233	0.0284	0.0119	0.0165
234	0.0282	0.0118	0.0164
235	0.0280	0.0118	0.0162
236	0.0278	0.0117	0.0161
237	0.0276	0.0116	0.0160
238	0.0274	0.0115	0.0159
239	0.0272	0.0114	0.0158
240	0.0270	0.0113	0.0157
241	0.0268	0.0112	0.0156
242	0.0266	0.0112	0.0154
243	0.0264	0.0111	0.0153
244	0.0263	0.0110	0.0152
245	0.0261	0.0110	0.0151
246	0.0259	0.0109	0.0151
247	0.0258	0.0108	0.0150
248	0.0256	0.0108	0.0149
249	0.0255	0.0107	0.0148
250	0.0253	0.0106	0.0147
251	0.0252	0.0106	0.0146
252	0.0250	0.0105	0.0145
253	0.0249	0.0105	0.0145
254	0.0248	0.0104	0.0144
255	0.0246	0.0103	0.0143
256	0.0245	0.0103	0.0142
257	0.0244	0.0102	0.0142
258	0.0243	0.0102	0.0141
259	0.0241	0.0101	0.0140
260	0.0240	0.0101	0.0139
261	0.0239	0.0100	0.0139
262	0.0238	0.0100	0.0138
263	0.0237	0.0099	0.0137
264	0.0236	0.0099	0.0137
265	0.0235	0.0098	0.0136
266	0.0234	0.0098	0.0136
267	0.0233	0.0098	0.0135
268	0.0232	0.0097	0.0134
269	0.0231	0.0097	0.0134
270	0.0230	0.0096	0.0133
271	0.0229	0.0096	0.0133
272	0.0228	0.0096	0.0132
273	0.0227	0.0095	0.0132
274	0.0226	0.0095	0.0131
275	0.0225	0.0094	0.0130
276	0.0224	0.0094	0.0130
277	0.0223	0.0094	0.0129
278	0.0222	0.0093	0.0129
279	0.0221	0.0093	0.0128
280	0.0221	0.0093	0.0128
281	0.0220	0.0092	0.0127
282	0.0219	0.0092	0.0127
283	0.0218	0.0092	0.0127

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      284              0.0217           0.0091              0.0126
      285              0.0216           0.0091              0.0126
      286              0.0216           0.0091              0.0125
      287              0.0215           0.0090              0.0125
      288              0.0214           0.0090              0.0124
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      3.65(In)
      Total effective rainfall =      5.52(In)
      Peak flow rate in flood hydrograph =     22.81(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0003      0.04  Q         |          |          |          |
  0+10       0.0018      0.21  Q         |          |          |          |
  0+15       0.0062      0.65  Q         |          |          |          |
  0+20       0.0130      0.98  VQ        |          |          |          |
  0+25       0.0207      1.12  VQ        |          |          |          |
  0+30       0.0291      1.22  VQ        |          |          |          |
  0+35       0.0380      1.29  VQ        |          |          |          |
  0+40       0.0472      1.34  VQ        |          |          |          |
  0+45       0.0567      1.38  VQ        |          |          |          |
  0+50       0.0663      1.40  VQ        |          |          |          |
  0+55       0.0761      1.42  VQ        |          |          |          |
  1+ 0       0.0859      1.43  VQ        |          |          |          |
  1+ 5       0.0958      1.43  VQ        |          |          |          |
  1+10       0.1057      1.44  VQ        |          |          |          |
  1+15       0.1157      1.45  |Q        |          |          |          |
  1+20       0.1257      1.45  |Q        |          |          |          |
  1+25       0.1358      1.46  |Q        |          |          |          |
  1+30       0.1458      1.46  |Q        |          |          |          |
  1+35       0.1559      1.47  |Q        |          |          |          |
  1+40       0.1660      1.47  |Q        |          |          |          |
  1+45       0.1762      1.47  |Q        |          |          |          |
  1+50       0.1863      1.47  |Q        |          |          |          |
  1+55       0.1965      1.48  |Q        |          |          |          |
  2+ 0       0.2067      1.48  |Q        |          |          |          |
  2+ 5       0.2169      1.48  |Q        |          |          |          |
  2+10       0.2271      1.48  |QV       |          |          |          |
  2+15       0.2374      1.49  |QV       |          |          |          |
  2+20       0.2476      1.49  |QV       |          |          |          |
  2+25       0.2579      1.49  |QV       |          |          |          |
  2+30       0.2682      1.50  |QV       |          |          |          |
  2+35       0.2785      1.50  |QV       |          |          |          |
  2+40       0.2889      1.50  | Q       |          |          |          |
  2+45       0.2993      1.51  | Q       |          |          |          |
  2+50       0.3096      1.51  | Q       |          |          |          |
  2+55       0.3201      1.51  | Q       |          |          |          |
  3+ 0       0.3305      1.51  | QV      |          |          |          |
  3+ 5       0.3409      1.52  | QV      |          |          |          |
  3+10       0.3514      1.52  | QV      |          |          |          |
  3+15       0.3619      1.52  | QV      |          |          |          |
  3+20       0.3724      1.53  | QV      |          |          |          |
  3+25       0.3830      1.53  | QV      |          |          |          |
  3+30       0.3935      1.53  | QV      |          |          |          |
  3+35       0.4041      1.54  | QV      |          |          |          |
  3+40       0.4147      1.54  | QV      |          |          |          |
  3+45       0.4254      1.54  | QV      |          |          |          |
  3+50       0.4360      1.55  | QV      |          |          |          |
  3+55       0.4467      1.55  | Q V     |          |          |          |
  4+ 0       0.4574      1.55  | Q V     |          |          |          |
  4+ 5       0.4681      1.56  | Q V     |          |          |          |
  4+10       0.4789      1.56  | Q V     |          |          |          |
  4+15       0.4897      1.56  | Q V     |          |          |          |
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 4+20      0.5005      1.57  | Q V     |         |         |         |
 4+25      0.5113      1.57  | Q V     |         |         |         |
 4+30      0.5221      1.58  | Q V     |         |         |         |
 4+35      0.5330      1.58  | Q V     |         |         |         |
 4+40      0.5439      1.58  | Q V     |         |         |         |
 4+45      0.5548      1.59  | Q  V    |         |         |         |
 4+50      0.5658      1.59  | Q  V    |         |         |         |
 4+55      0.5768      1.59  | Q  V    |         |         |         |
 5+ 0      0.5878      1.60  | Q  V    |         |         |         |
 5+ 5      0.5988      1.60  | Q  V    |         |         |         |
 5+10      0.6099      1.61  | Q  V    |         |         |         |
 5+15      0.6209      1.61  | Q  V    |         |         |         |
 5+20      0.6321      1.61  | Q  V    |         |         |         |
 5+25      0.6432      1.62  | Q  V    |         |         |         |
 5+30      0.6544      1.62  | Q  V    |         |         |         |
 5+35      0.6656      1.63  | Q   V   |         |         |         |
 5+40      0.6768      1.63  | Q   V   |         |         |         |
 5+45      0.6880      1.63  | Q   V   |         |         |         |
 5+50      0.6993      1.64  | Q   V   |         |         |         |
 5+55      0.7106      1.64  | Q   V   |         |         |         |
 6+ 0      0.7220      1.65  | Q   V   |         |         |         |
 6+ 5      0.7334      1.65  | Q   V   |         |         |         |
 6+10      0.7448      1.66  | Q   V   |         |         |         |
 6+15      0.7562      1.66  | Q   V   |         |         |         |
 6+20      0.7677      1.66  | Q    V  |         |         |         |
 6+25      0.7792      1.67  | Q    V  |         |         |         |
 6+30      0.7907      1.67  | Q    V  |         |         |         |
 6+35      0.8023      1.68  | Q    V  |         |         |         |
 6+40      0.8139      1.68  | Q    V  |         |         |         |
 6+45      0.8255      1.69  | Q    V  |         |         |         |
 6+50      0.8371      1.69  | Q    V  |         |         |         |
 6+55      0.8488      1.70  | Q    V  |         |         |         |
 7+ 0      0.8606      1.70  | Q    V  |         |         |         |
 7+ 5      0.8723      1.71  | Q    V  |         |         |         |
 7+10      0.8841      1.71  | Q     V |         |         |         |
 7+15      0.8960      1.72  | Q     V |         |         |         |
 7+20      0.9078      1.72  | Q     V |         |         |         |
 7+25      0.9197      1.73  | Q     V |         |         |         |
 7+30      0.9317      1.73  | Q     V |         |         |         |
 7+35      0.9437      1.74  | Q     V |         |         |         |
 7+40      0.9557      1.74  | Q     V |         |         |         |
 7+45      0.9677      1.75  | Q     V |         |         |         |
 7+50      0.9798      1.76  | Q     V |         |         |         |
 7+55      0.9920      1.76  | Q      V|         |         |         |
 8+ 0      1.0041      1.77  | Q      V|         |         |         |
 8+ 5      1.0164      1.77  | Q      V|         |         |         |
 8+10      1.0286      1.78  | Q      V|         |         |         |
 8+15      1.0409      1.79  | Q      V|         |         |         |
 8+20      1.0532      1.79  | Q      V|         |         |         |
 8+25      1.0656      1.80  | Q      V|         |         |         |
 8+30      1.0780      1.80  | Q      V|         |         |         |
 8+35      1.0905      1.81  | Q      V|         |         |         |
 8+40      1.1030      1.82  | Q       V         |         |         |
 8+45      1.1156      1.82  | Q       V         |         |         |
 8+50      1.1282      1.83  | Q       V         |         |         |
 8+55      1.1408      1.84  | Q       V         |         |         |
 9+ 0      1.1535      1.84  | Q       V         |         |         |
 9+ 5      1.1663      1.85  | Q       V         |         |         |
 9+10      1.1791      1.86  | Q       V         |         |         |
 9+15      1.1919      1.86  | Q       V         |         |         |
 9+20      1.2048      1.87  | Q       |V        |         |         |
 9+25      1.2177      1.88  | Q       |V        |         |         |
 9+30      1.2307      1.89  | Q       |V        |         |         |
 9+35      1.2438      1.89  | Q       |V        |         |         |
 9+40      1.2569      1.90  | Q       |V        |         |         |
 9+45      1.2700      1.91  | Q       |V        |         |         |
 9+50      1.2832      1.92  | Q       |V        |         |         |
 9+55      1.2965      1.93  | Q       |V        |         |         |
10+ 0      1.3098      1.93  | Q       |V        |         |         |
10+ 5      1.3232      1.94  | Q       | V       |         |         |
10+10      1.3366      1.95  | Q       | V       |         |         |
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10+15       1.3501      1.96  | Q       | V       |         |         |
10+20       1.3637      1.97  | Q       | V       |         |         |
10+25       1.3773      1.98  | Q       | V       |         |         |
10+30       1.3910      1.99  | Q       | V       |         |         |
10+35       1.4048      2.00  | Q       | V       |         |         |
10+40       1.4186      2.01  | Q       | V       |         |         |
10+45       1.4325      2.02  | Q       |  V      |         |         |
10+50       1.4464      2.03  | Q       |  V      |         |         |
10+55       1.4604      2.04  | Q       |  V      |         |         |
11+ 0       1.4745      2.05  | Q       |  V      |         |         |
11+ 5       1.4887      2.06  | Q       |  V      |         |         |
11+10       1.5029      2.07  | Q       |  V      |         |         |
11+15       1.5173      2.08  | Q       |  V      |         |         |
11+20       1.5317      2.09  | Q       |  V      |         |         |
11+25       1.5461      2.10  | Q       |   V     |         |         |
11+30       1.5607      2.11  | Q       |   V     |         |         |
11+35       1.5753      2.13  | Q       |   V     |         |         |
11+40       1.5901      2.14  | Q       |   V     |         |         |
11+45       1.6049      2.15  | Q       |   V     |         |         |
11+50       1.6198      2.16  | Q       |   V     |         |         |
11+55       1.6348      2.18  | Q       |   V     |         |         |
12+ 0       1.6499      2.19  | Q       |    V    |         |         |
12+ 5       1.6650      2.20  | Q       |    V    |         |         |
12+10       1.6801      2.19  | Q       |    V    |         |         |
12+15       1.6949      2.15  | Q       |    V    |         |         |
12+20       1.7095      2.12  | Q       |    V    |         |         |
12+25       1.7241      2.12  | Q       |    V    |         |         |
12+30       1.7388      2.13  | Q       |    V    |         |         |
12+35       1.7535      2.13  | Q       |     V   |         |         |
12+40       1.7683      2.15  | Q       |     V   |         |         |
12+45       1.7832      2.16  | Q       |     V   |         |         |
12+50       1.7981      2.18  | Q       |     V   |         |         |
12+55       1.8133      2.20  | Q       |     V   |         |         |
13+ 0       1.8285      2.22  | Q       |     V   |         |         |
13+ 5       1.8439      2.24  | Q       |     V   |         |         |
13+10       1.8595      2.26  |  Q      |     V   |         |         |
13+15       1.8752      2.28  |  Q      |      V  |         |         |
13+20       1.8911      2.30  |  Q      |      V  |         |         |
13+25       1.9071      2.33  |  Q      |      V  |         |         |
13+30       1.9233      2.36  |  Q      |      V  |         |         |
13+35       1.9398      2.38  |  Q      |      V  |         |         |
13+40       1.9564      2.41  |  Q      |      V  |         |         |
13+45       1.9732      2.44  |  Q      |       V |         |         |
13+50       1.9902      2.47  |  Q      |       V |         |         |
13+55       2.0074      2.50  |  Q      |       V |         |         |
14+ 0       2.0249      2.54  |  Q      |       V |         |         |
14+ 5       2.0427      2.57  |  Q      |       V |         |         |
14+10       2.0606      2.61  |  Q      |       V |         |         |
14+15       2.0789      2.65  |  Q      |       V |         |         |
14+20       2.0975      2.69  |  Q      |        V|         |         |
14+25       2.1163      2.74  |  Q      |        V|         |         |
14+30       2.1355      2.79  |  Q      |        V|         |         |
14+35       2.1551      2.84  |  Q      |        V|         |         |
14+40       2.1750      2.89  |  Q      |        V|         |         |
14+45       2.1953      2.95  |  Q      |         V         |         |
14+50       2.2161      3.01  |   Q     |         V         |         |
14+55       2.2373      3.08  |   Q     |         V         |         |
15+ 0       2.2590      3.15  |   Q     |         V         |         |
15+ 5       2.2813      3.23  |   Q     |         V         |         |
15+10       2.3041      3.32  |   Q     |         |V        |         |
15+15       2.3277      3.42  |   Q     |         |V        |         |
15+20       2.3520      3.53  |   Q     |         |V        |         |
15+25       2.3767      3.59  |   Q     |         |V        |         |
15+30       2.4007      3.48  |   Q     |         |V        |         |
15+35       2.4213      2.99  |  Q      |         | V       |         |
15+40       2.4399      2.70  |  Q      |         | V       |         |
15+45       2.4586      2.72  |  Q      |         | V       |         |
15+50       2.4784      2.88  |  Q      |         | V       |         |
15+55       2.5007      3.23  |   Q     |         | V       |         |
16+ 0       2.5275      3.90  |    Q    |         |  V      |         |
16+ 5       2.5739      6.73  |       Q |         |  V      |         |
```

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16+10       2.6606     12.59  |          |     Q    |   V      |          |
16+15       2.8176     22.81  |          |          |    V     Q          |
16+20       2.9378     17.44  |          |          |  Q  V    |          |
16+25       3.0049      9.74  |          | Q        |      V   |          |
16+30       3.0559      7.41  |         Q|          |      V   |          |
16+35       3.1003      6.43  |        Q |          |       V  |          |
16+40       3.1397      5.73  |       Q  |          |       V  |          |
16+45       3.1741      5.00  |     Q    |          |        V |          |
16+50       3.2043      4.37  |    Q     |          |        V |          |
16+55       3.2304      3.80  |    Q     |          |        V |          |
17+ 0       3.2541      3.44  |   Q      |          |        V |          |
17+ 5       3.2767      3.28  |   Q      |          |        V |          |
17+10       3.2981      3.11  |   Q      |          |         V          |
17+15       3.3188      3.01  |   Q      |          |         V          |
17+20       3.3387      2.89  |  Q       |          |         V          |
17+25       3.3576      2.74  |  Q       |          |         V          |
17+30       3.3757      2.63  |  Q       |          |         V          |
17+35       3.3930      2.51  |  Q       |          |         |V         |
17+40       3.4098      2.44  |  Q       |          |         |V         |
17+45       3.4262      2.39  |  Q       |          |         |V         |
17+50       3.4423      2.33  |  Q       |          |         |V         |
17+55       3.4580      2.28  |  Q       |          |         |V         |
18+ 0       3.4734      2.23  | Q        |          |         |V         |
18+ 5       3.4885      2.20  | Q        |          |         |V         |
18+10       3.5035      2.18  | Q        |          |         | V        |
18+15       3.5187      2.20  | Q        |          |         | V        |
18+20       3.5339      2.21  | Q        |          |         | V        |
18+25       3.5490      2.19  | Q        |          |         | V        |
18+30       3.5640      2.18  | Q        |          |         | V        |
18+35       3.5788      2.16  | Q        |          |         | V        |
18+40       3.5935      2.14  | Q        |          |         | V        |
18+45       3.6081      2.12  | Q        |          |         | V        |
18+50       3.6225      2.09  | Q        |          |         |  V       |
18+55       3.6368      2.07  | Q        |          |         |  V       |
19+ 0       3.6509      2.05  | Q        |          |         |  V       |
19+ 5       3.6649      2.03  | Q        |          |         |  V       |
19+10       3.6788      2.01  | Q        |          |         |  V       |
19+15       3.6925      1.99  | Q        |          |         |  V       |
19+20       3.7061      1.98  | Q        |          |         |  V       |
19+25       3.7196      1.96  | Q        |          |         |  V       |
19+30       3.7330      1.94  | Q        |          |         |   V      |
19+35       3.7462      1.92  | Q        |          |         |   V      |
19+40       3.7594      1.91  | Q        |          |         |   V      |
19+45       3.7724      1.89  | Q        |          |         |   V      |
19+50       3.7853      1.88  | Q        |          |         |   V      |
19+55       3.7981      1.86  | Q        |          |         |   V      |
20+ 0       3.8109      1.85  | Q        |          |         |   V      |
20+ 5       3.8235      1.83  | Q        |          |         |   V      |
20+10       3.8360      1.82  | Q        |          |         |    V     |
20+15       3.8485      1.81  | Q        |          |         |    V     |
20+20       3.8609      1.80  | Q        |          |         |    V     |
20+25       3.8731      1.78  | Q        |          |         |    V     |
20+30       3.8853      1.77  | Q        |          |         |    V     |
20+35       3.8975      1.76  | Q        |          |         |    V     |
20+40       3.9095      1.75  | Q        |          |         |    V     |
20+45       3.9215      1.74  | Q        |          |         |    V     |
20+50       3.9334      1.73  | Q        |          |         |    V     |
20+55       3.9452      1.72  | Q        |          |         |     V    |
21+ 0       3.9569      1.71  | Q        |          |         |     V    |
21+ 5       3.9686      1.70  | Q        |          |         |     V    |
21+10       3.9802      1.69  | Q        |          |         |     V    |
21+15       3.9918      1.68  | Q        |          |         |     V    |
21+20       4.0033      1.67  | Q        |          |         |     V    |
21+25       4.0147      1.66  | Q        |          |         |     V    |
21+30       4.0261      1.65  | Q        |          |         |     V    |
21+35       4.0374      1.64  | Q        |          |         |     V    |
21+40       4.0486      1.63  | Q        |          |         |     V    |
21+45       4.0598      1.62  | Q        |          |         |      V   |
21+50       4.0709      1.62  | Q        |          |         |      V   |
21+55       4.0820      1.61  | Q        |          |         |      V   |
22+ 0       4.0930      1.60  | Q        |          |         |      V   |
```

```
  22+ 5       4.1040      1.59  | Q       |         |         |      V  |
  22+10       4.1149      1.59  | Q       |         |         |      V  |
  22+15       4.1258      1.58  | Q       |         |         |      V  |
  22+20       4.1366      1.57  | Q       |         |         |      V  |
  22+25       4.1474      1.56  | Q       |         |         |      V  |
  22+30       4.1581      1.56  | Q       |         |         |       V |
  22+35       4.1688      1.55  | Q       |         |         |       V |
  22+40       4.1794      1.54  | Q       |         |         |       V |
  22+45       4.1900      1.54  | Q       |         |         |       V |
  22+50       4.2005      1.53  | Q       |         |         |       V |
  22+55       4.2110      1.52  | Q       |         |         |       V |
  23+ 0       4.2214      1.52  | Q       |         |         |       V |
  23+ 5       4.2318      1.51  | Q       |         |         |       V |
  23+10       4.2422      1.50  | Q       |         |         |       V |
  23+15       4.2525      1.50  |Q        |         |         |       V |
  23+20       4.2628      1.49  |Q        |         |         |       V |
  23+25       4.2730      1.49  |Q        |         |         |        V|
  23+30       4.2832      1.48  |Q        |         |         |        V|
  23+35       4.2934      1.48  |Q        |         |         |        V|
  23+40       4.3035      1.47  |Q        |         |         |        V|
  23+45       4.3136      1.46  |Q        |         |         |        V|
  23+50       4.3236      1.46  |Q        |         |         |        V|
  23+55       4.3337      1.45  |Q        |         |         |        V|
  24+ 0       4.3436      1.45  |Q        |         |         |        V|
  24+ 5       4.3533      1.40  |Q        |         |         |        V|
  24+10       4.3617      1.23  |Q        |         |         |        V|
  24+15       4.3671      0.78  |Q        |         |         |        V|
  24+20       4.3703      0.46  Q         |         |         |        V|
  24+25       4.3724      0.31  Q         |         |         |        V|
  24+30       4.3739      0.22  Q         |         |         |        V|
  24+35       4.3749      0.15  Q         |         |         |        V|
  24+40       4.3756      0.10  Q         |         |         |        V|
  24+45       4.3760      0.06  Q         |         |         |        V|
  24+50       4.3763      0.04  Q         |         |         |        V|
  24+55       4.3765      0.03  Q         |         |         |        V|
  25+ 0       4.3766      0.02  Q         |         |         |        V|
  25+ 5       4.3767      0.02  Q         |         |         |        V|
  25+10       4.3768      0.01  Q         |         |         |        V|
  25+15       4.3769      0.01  Q         |         |         |        V|
  25+20       4.3769      0.00  Q         |         |         |        V|
  25+25       4.3769      0.00  Q         |         |         |         V
--------------------------------------------------------------------------
```

Area 'D' – 100 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'D'
100 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             9.52            1           1.00
------------------------------------------------------------------
Rainfall data for year 2
             9.52            6           2.00
------------------------------------------------------------------
Rainfall data for year 2
             9.52           24           4.00
------------------------------------------------------------------
Rainfall data for year 100
             9.52            1           1.50
------------------------------------------------------------------
Rainfall data for year 100
             9.52            6           4.50
------------------------------------------------------------------
Rainfall data for year 100
             9.52           24          12.00
------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 68.7      86.0          9.52      1.000     0.266    1.000    0.266

Area-averaged adjusted loss rate Fm (In/Hr) =  0.266

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
9.52	1.000	68.7	86.0	1.63	0.853

Area-averaged catchment yield fraction, Y = 0.853
Area-averaged low loss fraction, Yb = 0.147
User entry of time of concentration = 0.262 (hours)
++
Watershed area = 9.52(Ac.)
Catchment Lag time = 0.210 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 39.7583
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.266(In/Hr)
Average low loss rate fraction (Yb) = 0.147 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 9.52(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.711(In)
30-minute factor = 1.000 Adjusted rainfall = 1.218(In)
1-hour factor = 1.000 Adjusted rainfall = 1.499(In)
3-hour factor = 1.000 Adjusted rainfall = 2.942(In)
6-hour factor = 1.000 Adjusted rainfall = 4.500(In)
24-hour factor = 1.000 Adjusted rainfall = 12.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 115.13 (CFS))	
1	3.107	3.578
2	14.718	13.368
3	45.653	35.616
4	68.346	26.128
5	78.353	11.521
6	85.032	7.690
7	89.767	5.452
8	93.189	3.940
9	95.606	2.782
10	97.231	1.872
11	98.108	1.010
12	98.568	0.529
13	98.955	0.446
14	99.222	0.306
15	99.512	0.334
16	99.764	0.291
17	99.907	0.164
18	100.000	0.107

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7114	0.7114
2	0.8759	0.1644
3	0.9892	0.1133
4	1.0784	0.0892
5	1.1530	0.0747
6	1.2178	0.0648
7	1.2755	0.0576
8	1.3276	0.0521

9	1.3754	0.0477
10	1.4195	0.0442
11	1.4607	0.0412
12	1.4993	0.0386
13	1.5748	0.0755
14	1.6480	0.0733
15	1.7193	0.0713
16	1.7887	0.0694
17	1.8565	0.0678
18	1.9228	0.0663
19	1.9876	0.0648
20	2.0512	0.0635
21	2.1135	0.0623
22	2.1747	0.0612
23	2.2348	0.0601
24	2.2939	0.0591
25	2.3521	0.0582
26	2.4094	0.0573
27	2.4658	0.0564
28	2.5215	0.0556
29	2.5763	0.0549
30	2.6305	0.0541
31	2.6839	0.0535
32	2.7367	0.0528
33	2.7889	0.0522
34	2.8404	0.0515
35	2.8914	0.0510
36	2.9418	0.0504
37	2.9916	0.0498
38	3.0410	0.0493
39	3.0898	0.0488
40	3.1381	0.0483
41	3.1860	0.0479
42	3.2334	0.0474
43	3.2804	0.0470
44	3.3270	0.0466
45	3.3732	0.0462
46	3.4189	0.0458
47	3.4643	0.0454
48	3.5093	0.0450
49	3.5540	0.0447
50	3.5983	0.0443
51	3.6422	0.0440
52	3.6859	0.0436
53	3.7292	0.0433
54	3.7721	0.0430
55	3.8148	0.0427
56	3.8572	0.0424
57	3.8993	0.0421
58	3.9411	0.0418
59	3.9826	0.0415
60	4.0239	0.0413
61	4.0649	0.0410
62	4.1056	0.0407
63	4.1461	0.0405
64	4.1863	0.0402
65	4.2263	0.0400
66	4.2661	0.0398
67	4.3056	0.0395
68	4.3449	0.0393
69	4.3840	0.0391
70	4.4228	0.0389
71	4.4614	0.0386
72	4.4999	0.0384
73	4.5440	0.0441
74	4.5879	0.0440
75	4.6317	0.0438
76	4.6753	0.0436
77	4.7188	0.0434
78	4.7621	0.0433
79	4.8052	0.0431

80	4.8481	0.0430
81	4.8909	0.0428
82	4.9336	0.0426
83	4.9761	0.0425
84	5.0184	0.0423
85	5.0606	0.0422
86	5.1027	0.0421
87	5.1446	0.0419
88	5.1863	0.0418
89	5.2280	0.0416
90	5.2695	0.0415
91	5.3108	0.0414
92	5.3520	0.0412
93	5.3931	0.0411
94	5.4341	0.0410
95	5.4749	0.0408
96	5.5157	0.0407
97	5.5563	0.0406
98	5.5967	0.0405
99	5.6371	0.0403
100	5.6773	0.0402
101	5.7174	0.0401
102	5.7574	0.0400
103	5.7973	0.0399
104	5.8370	0.0398
105	5.8767	0.0397
106	5.9162	0.0395
107	5.9557	0.0394
108	5.9950	0.0393
109	6.0342	0.0392
110	6.0733	0.0391
111	6.1124	0.0390
112	6.1513	0.0389
113	6.1901	0.0388
114	6.2288	0.0387
115	6.2674	0.0386
116	6.3059	0.0385
117	6.3443	0.0384
118	6.3826	0.0383
119	6.4209	0.0382
120	6.4590	0.0381
121	6.4970	0.0380
122	6.5350	0.0379
123	6.5728	0.0379
124	6.6106	0.0378
125	6.6483	0.0377
126	6.6859	0.0376
127	6.7234	0.0375
128	6.7608	0.0374
129	6.7981	0.0373
130	6.8353	0.0372
131	6.8725	0.0372
132	6.9096	0.0371
133	6.9466	0.0370
134	6.9835	0.0369
135	7.0203	0.0368
136	7.0571	0.0368
137	7.0937	0.0367
138	7.1303	0.0366
139	7.1669	0.0365
140	7.2033	0.0364
141	7.2397	0.0364
142	7.2760	0.0363
143	7.3122	0.0362
144	7.3483	0.0361
145	7.3844	0.0361
146	7.4204	0.0360
147	7.4563	0.0359
148	7.4922	0.0359
149	7.5279	0.0358
150	7.5637	0.0357

151	7.5993	0.0356
152	7.6349	0.0356
153	7.6704	0.0355
154	7.7058	0.0354
155	7.7412	0.0354
156	7.7765	0.0353
157	7.8117	0.0352
158	7.8469	0.0352
159	7.8820	0.0351
160	7.9170	0.0350
161	7.9520	0.0350
162	7.9869	0.0349
163	8.0218	0.0349
164	8.0566	0.0348
165	8.0913	0.0347
166	8.1260	0.0347
167	8.1606	0.0346
168	8.1951	0.0345
169	8.2296	0.0345
170	8.2640	0.0344
171	8.2984	0.0344
172	8.3327	0.0343
173	8.3669	0.0342
174	8.4011	0.0342
175	8.4353	0.0341
176	8.4693	0.0341
177	8.5034	0.0340
178	8.5373	0.0340
179	8.5712	0.0339
180	8.6051	0.0339
181	8.6389	0.0338
182	8.6726	0.0337
183	8.7063	0.0337
184	8.7399	0.0336
185	8.7735	0.0336
186	8.8070	0.0335
187	8.8405	0.0335
188	8.8739	0.0334
189	8.9073	0.0334
190	8.9406	0.0333
191	8.9739	0.0333
192	9.0071	0.0332
193	9.0403	0.0332
194	9.0734	0.0331
195	9.1065	0.0331
196	9.1395	0.0330
197	9.1725	0.0330
198	9.2054	0.0329
199	9.2382	0.0329
200	9.2711	0.0328
201	9.3038	0.0328
202	9.3366	0.0327
203	9.3692	0.0327
204	9.4019	0.0326
205	9.4345	0.0326
206	9.4670	0.0325
207	9.4995	0.0325
208	9.5319	0.0324
209	9.5643	0.0324
210	9.5967	0.0324
211	9.6290	0.0323
212	9.6613	0.0323
213	9.6935	0.0322
214	9.7257	0.0322
215	9.7578	0.0321
216	9.7899	0.0321
217	9.8219	0.0320
218	9.8539	0.0320
219	9.8859	0.0320
220	9.9178	0.0319
221	9.9497	0.0319

222	9.9815	0.0318	
223	10.0133	0.0318	
224	10.0451	0.0317	
225	10.0768	0.0317	
226	10.1084	0.0317	
227	10.1401	0.0316	
228	10.1717	0.0316	
229	10.2032	0.0315	
230	10.2347	0.0315	
231	10.2662	0.0315	
232	10.2976	0.0314	
233	10.3290	0.0314	
234	10.3603	0.0313	
235	10.3916	0.0313	
236	10.4229	0.0313	
237	10.4541	0.0312	
238	10.4853	0.0312	
239	10.5165	0.0312	
240	10.5476	0.0311	
241	10.5787	0.0311	
242	10.6097	0.0310	
243	10.6407	0.0310	
244	10.6717	0.0310	
245	10.7026	0.0309	
246	10.7335	0.0309	
247	10.7643	0.0309	
248	10.7951	0.0308	
249	10.8259	0.0308	
250	10.8567	0.0307	
251	10.8874	0.0307	
252	10.9180	0.0307	
253	10.9487	0.0306	
254	10.9793	0.0306	
255	11.0098	0.0306	
256	11.0404	0.0305	
257	11.0709	0.0305	
258	11.1013	0.0305	
259	11.1318	0.0304	
260	11.1622	0.0304	
261	11.1925	0.0304	
262	11.2228	0.0303	
263	11.2531	0.0303	
264	11.2834	0.0303	
265	11.3136	0.0302	
266	11.3438	0.0302	
267	11.3740	0.0302	
268	11.4041	0.0301	
269	11.4342	0.0301	
270	11.4642	0.0301	
271	11.4943	0.0300	
272	11.5242	0.0300	
273	11.5542	0.0300	
274	11.5841	0.0299	
275	11.6140	0.0299	
276	11.6439	0.0299	
277	11.6737	0.0298	
278	11.7035	0.0298	
279	11.7333	0.0298	
280	11.7630	0.0297	
281	11.7928	0.0297	
282	11.8224	0.0297	
283	11.8521	0.0296	
284	11.8817	0.0296	
285	11.9113	0.0296	
286	11.9408	0.0296	
287	11.9704	0.0295	
288	11.9999	0.0295	

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)

1	0.0295	0.0043	0.0252
2	0.0295	0.0043	0.0252
3	0.0296	0.0043	0.0252
4	0.0296	0.0043	0.0253
5	0.0297	0.0044	0.0253
6	0.0297	0.0044	0.0254
7	0.0298	0.0044	0.0254
8	0.0298	0.0044	0.0254
9	0.0299	0.0044	0.0255
10	0.0299	0.0044	0.0255
11	0.0300	0.0044	0.0256
12	0.0300	0.0044	0.0256
13	0.0301	0.0044	0.0257
14	0.0301	0.0044	0.0257
15	0.0302	0.0044	0.0257
16	0.0302	0.0044	0.0258
17	0.0303	0.0044	0.0258
18	0.0303	0.0044	0.0258
19	0.0304	0.0045	0.0259
20	0.0304	0.0045	0.0259
21	0.0305	0.0045	0.0260
22	0.0305	0.0045	0.0260
23	0.0306	0.0045	0.0261
24	0.0306	0.0045	0.0261
25	0.0307	0.0045	0.0262
26	0.0307	0.0045	0.0262
27	0.0308	0.0045	0.0263
28	0.0308	0.0045	0.0263
29	0.0309	0.0045	0.0264
30	0.0309	0.0045	0.0264
31	0.0310	0.0045	0.0265
32	0.0310	0.0046	0.0265
33	0.0311	0.0046	0.0266
34	0.0312	0.0046	0.0266
35	0.0312	0.0046	0.0266
36	0.0313	0.0046	0.0267
37	0.0313	0.0046	0.0267
38	0.0314	0.0046	0.0268
39	0.0315	0.0046	0.0269
40	0.0315	0.0046	0.0269
41	0.0316	0.0046	0.0270
42	0.0316	0.0046	0.0270
43	0.0317	0.0046	0.0271
44	0.0317	0.0047	0.0271
45	0.0318	0.0047	0.0272
46	0.0319	0.0047	0.0272
47	0.0320	0.0047	0.0273
48	0.0320	0.0047	0.0273
49	0.0321	0.0047	0.0274
50	0.0321	0.0047	0.0274
51	0.0322	0.0047	0.0275
52	0.0323	0.0047	0.0275
53	0.0324	0.0047	0.0276
54	0.0324	0.0048	0.0277
55	0.0325	0.0048	0.0277
56	0.0325	0.0048	0.0278
57	0.0326	0.0048	0.0278
58	0.0327	0.0048	0.0279
59	0.0328	0.0048	0.0280
60	0.0328	0.0048	0.0280
61	0.0329	0.0048	0.0281
62	0.0330	0.0048	0.0281
63	0.0331	0.0048	0.0282
64	0.0331	0.0049	0.0283
65	0.0332	0.0049	0.0283
66	0.0333	0.0049	0.0284
67	0.0334	0.0049	0.0285
68	0.0334	0.0049	0.0285
69	0.0335	0.0049	0.0286
70	0.0336	0.0049	0.0287

71	0.0337	0.0049	0.0287
72	0.0337	0.0049	0.0288
73	0.0339	0.0050	0.0289
74	0.0339	0.0050	0.0289
75	0.0340	0.0050	0.0290
76	0.0341	0.0050	0.0291
77	0.0342	0.0050	0.0292
78	0.0342	0.0050	0.0292
79	0.0344	0.0050	0.0293
80	0.0344	0.0050	0.0294
81	0.0345	0.0051	0.0295
82	0.0346	0.0051	0.0295
83	0.0347	0.0051	0.0296
84	0.0348	0.0051	0.0297
85	0.0349	0.0051	0.0298
86	0.0350	0.0051	0.0298
87	0.0351	0.0051	0.0300
88	0.0352	0.0052	0.0300
89	0.0353	0.0052	0.0301
90	0.0354	0.0052	0.0302
91	0.0355	0.0052	0.0303
92	0.0356	0.0052	0.0304
93	0.0357	0.0052	0.0305
94	0.0358	0.0052	0.0305
95	0.0359	0.0053	0.0307
96	0.0360	0.0053	0.0307
97	0.0361	0.0053	0.0308
98	0.0362	0.0053	0.0309
99	0.0364	0.0053	0.0310
100	0.0364	0.0053	0.0311
101	0.0366	0.0054	0.0312
102	0.0367	0.0054	0.0313
103	0.0368	0.0054	0.0314
104	0.0369	0.0054	0.0315
105	0.0371	0.0054	0.0316
106	0.0372	0.0054	0.0317
107	0.0373	0.0055	0.0319
108	0.0374	0.0055	0.0319
109	0.0376	0.0055	0.0321
110	0.0377	0.0055	0.0322
111	0.0379	0.0056	0.0323
112	0.0379	0.0056	0.0324
113	0.0381	0.0056	0.0325
114	0.0382	0.0056	0.0326
115	0.0384	0.0056	0.0328
116	0.0385	0.0056	0.0329
117	0.0387	0.0057	0.0330
118	0.0388	0.0057	0.0331
119	0.0390	0.0057	0.0333
120	0.0391	0.0057	0.0334
121	0.0393	0.0058	0.0336
122	0.0394	0.0058	0.0337
123	0.0397	0.0058	0.0338
124	0.0398	0.0058	0.0339
125	0.0400	0.0059	0.0341
126	0.0401	0.0059	0.0342
127	0.0403	0.0059	0.0344
128	0.0405	0.0059	0.0345
129	0.0407	0.0060	0.0347
130	0.0408	0.0060	0.0349
131	0.0411	0.0060	0.0351
132	0.0412	0.0060	0.0352
133	0.0415	0.0061	0.0354
134	0.0416	0.0061	0.0355
135	0.0419	0.0061	0.0358
136	0.0421	0.0062	0.0359
137	0.0423	0.0062	0.0361
138	0.0425	0.0062	0.0363
139	0.0428	0.0063	0.0365
140	0.0430	0.0063	0.0367
141	0.0433	0.0063	0.0369

142	0.0434	0.0064	0.0371
143	0.0438	0.0064	0.0374
144	0.0440	0.0064	0.0375
145	0.0384	0.0056	0.0328
146	0.0386	0.0057	0.0330
147	0.0391	0.0057	0.0333
148	0.0393	0.0058	0.0335
149	0.0398	0.0058	0.0339
150	0.0400	0.0059	0.0341
151	0.0405	0.0059	0.0345
152	0.0407	0.0060	0.0348
153	0.0413	0.0060	0.0352
154	0.0415	0.0061	0.0354
155	0.0421	0.0062	0.0359
156	0.0424	0.0062	0.0362
157	0.0430	0.0063	0.0367
158	0.0433	0.0063	0.0370
159	0.0440	0.0064	0.0375
160	0.0443	0.0065	0.0378
161	0.0450	0.0066	0.0384
162	0.0454	0.0067	0.0387
163	0.0462	0.0068	0.0394
164	0.0466	0.0068	0.0397
165	0.0474	0.0070	0.0405
166	0.0479	0.0070	0.0409
167	0.0488	0.0072	0.0417
168	0.0493	0.0072	0.0421
169	0.0504	0.0074	0.0430
170	0.0510	0.0075	0.0435
171	0.0522	0.0076	0.0445
172	0.0528	0.0077	0.0450
173	0.0541	0.0079	0.0462
174	0.0549	0.0080	0.0468
175	0.0564	0.0083	0.0482
176	0.0573	0.0084	0.0489
177	0.0591	0.0087	0.0505
178	0.0601	0.0088	0.0513
179	0.0623	0.0091	0.0532
180	0.0635	0.0093	0.0542
181	0.0663	0.0097	0.0565
182	0.0678	0.0099	0.0578
183	0.0713	0.0104	0.0608
184	0.0733	0.0107	0.0625
185	0.0386	0.0057	0.0330
186	0.0412	0.0060	0.0351
187	0.0477	0.0070	0.0407
188	0.0521	0.0076	0.0445
189	0.0648	0.0095	0.0553
190	0.0747	0.0109	0.0637
191	0.1133	0.0166	0.0967
192	0.1644	0.0222	0.1423
193	0.7114	0.0222	0.6893
194	0.0892	0.0131	0.0761
195	0.0576	0.0085	0.0492
196	0.0442	0.0065	0.0377
197	0.0755	0.0111	0.0644
198	0.0694	0.0102	0.0593
199	0.0648	0.0095	0.0553
200	0.0612	0.0090	0.0522
201	0.0582	0.0085	0.0496
202	0.0556	0.0082	0.0475
203	0.0535	0.0078	0.0456
204	0.0515	0.0076	0.0440
205	0.0498	0.0073	0.0425
206	0.0483	0.0071	0.0413
207	0.0470	0.0069	0.0401
208	0.0458	0.0067	0.0391
209	0.0447	0.0065	0.0381
210	0.0436	0.0064	0.0372
211	0.0427	0.0063	0.0364
212	0.0418	0.0061	0.0357

213	0.0410	0.0060	0.0350
214	0.0402	0.0059	0.0343
215	0.0395	0.0058	0.0337
216	0.0389	0.0057	0.0332
217	0.0441	0.0065	0.0377
218	0.0436	0.0064	0.0372
219	0.0431	0.0063	0.0368
220	0.0426	0.0063	0.0364
221	0.0422	0.0062	0.0360
222	0.0418	0.0061	0.0356
223	0.0414	0.0061	0.0353
224	0.0410	0.0060	0.0350
225	0.0406	0.0060	0.0346
226	0.0402	0.0059	0.0343
227	0.0399	0.0058	0.0340
228	0.0395	0.0058	0.0337
229	0.0392	0.0058	0.0335
230	0.0389	0.0057	0.0332
231	0.0386	0.0057	0.0329
232	0.0383	0.0056	0.0327
233	0.0380	0.0056	0.0325
234	0.0378	0.0055	0.0322
235	0.0375	0.0055	0.0320
236	0.0372	0.0055	0.0318
237	0.0370	0.0054	0.0316
238	0.0368	0.0054	0.0314
239	0.0365	0.0054	0.0312
240	0.0363	0.0053	0.0310
241	0.0361	0.0053	0.0308
242	0.0359	0.0053	0.0306
243	0.0356	0.0052	0.0304
244	0.0354	0.0052	0.0302
245	0.0352	0.0052	0.0301
246	0.0350	0.0051	0.0299
247	0.0349	0.0051	0.0297
248	0.0347	0.0051	0.0296
249	0.0345	0.0051	0.0294
250	0.0343	0.0050	0.0293
251	0.0341	0.0050	0.0291
252	0.0340	0.0050	0.0290
253	0.0338	0.0050	0.0288
254	0.0336	0.0049	0.0287
255	0.0335	0.0049	0.0286
256	0.0333	0.0049	0.0284
257	0.0332	0.0049	0.0283
258	0.0330	0.0048	0.0282
259	0.0329	0.0048	0.0281
260	0.0327	0.0048	0.0279
261	0.0326	0.0048	0.0278
262	0.0324	0.0048	0.0277
263	0.0323	0.0047	0.0276
264	0.0322	0.0047	0.0275
265	0.0320	0.0047	0.0273
266	0.0319	0.0047	0.0272
267	0.0318	0.0047	0.0271
268	0.0317	0.0046	0.0270
269	0.0315	0.0046	0.0269
270	0.0314	0.0046	0.0268
271	0.0313	0.0046	0.0267
272	0.0312	0.0046	0.0266
273	0.0311	0.0046	0.0265
274	0.0310	0.0045	0.0264
275	0.0309	0.0045	0.0263
276	0.0307	0.0045	0.0262
277	0.0306	0.0045	0.0261
278	0.0305	0.0045	0.0261
279	0.0304	0.0045	0.0260
280	0.0303	0.0044	0.0259
281	0.0302	0.0044	0.0258
282	0.0301	0.0044	0.0257
283	0.0300	0.0044	0.0256

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      284             0.0299          0.0044             0.0255
      285             0.0298          0.0044             0.0255
      286             0.0297          0.0044             0.0254
      287             0.0296          0.0043             0.0253
      288             0.0296          0.0043             0.0252
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      1.68(In)
      Total effective rainfall =     10.32(In)
      Peak flow rate in flood hydrograph =     31.88(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       10.0      20.0      30.0      40.0
----------------------------------------------------------------------------
  0+ 5       0.0006      0.09  Q         |         |         |         |
  0+10       0.0036      0.43  Q         |         |         |         |
  0+15       0.0127      1.32  VQ        |         |         |         |
  0+20       0.0263      1.98  VQ        |         |         |         |
  0+25       0.0420      2.28  V Q       |         |         |         |
  0+30       0.0590      2.47  V Q       |         |         |         |
  0+35       0.0770      2.61  V Q       |         |         |         |
  0+40       0.0958      2.72  V Q       |         |         |         |
  0+45       0.1150      2.79  V Q       |         |         |         |
  0+50       0.1346      2.84  V Q       |         |         |         |
  0+55       0.1543      2.87  V Q       |         |         |         |
  1+ 0       0.1742      2.89  V Q       |         |         |         |
  1+ 5       0.1943      2.91  V Q       |         |         |         |
  1+10       0.2144      2.92  |VQ       |         |         |         |
  1+15       0.2346      2.93  |VQ       |         |         |         |
  1+20       0.2548      2.94  |VQ       |         |         |         |
  1+25       0.2752      2.95  |VQ       |         |         |         |
  1+30       0.2956      2.96  |VQ       |         |         |         |
  1+35       0.3160      2.97  |VQ       |         |         |         |
  1+40       0.3364      2.97  |VQ       |         |         |         |
  1+45       0.3569      2.98  |VQ       |         |         |         |
  1+50       0.3775      2.98  |VQ       |         |         |         |
  1+55       0.3980      2.99  |VQ       |         |         |         |
  2+ 0       0.4186      2.99  | Q       |         |         |         |
  2+ 5       0.4392      3.00  | Q       |         |         |         |
  2+10       0.4599      3.00  | VQ      |         |         |         |
  2+15       0.4806      3.01  | VQ      |         |         |         |
  2+20       0.5013      3.01  | VQ      |         |         |         |
  2+25       0.5221      3.02  | VQ      |         |         |         |
  2+30       0.5429      3.02  | VQ      |         |         |         |
  2+35       0.5638      3.03  | VQ      |         |         |         |
  2+40       0.5847      3.03  | VQ      |         |         |         |
  2+45       0.6056      3.04  | VQ      |         |         |         |
  2+50       0.6265      3.04  |  Q      |         |         |         |
  2+55       0.6475      3.05  |  Q      |         |         |         |
  3+ 0       0.6686      3.05  |  Q      |         |         |         |
  3+ 5       0.6896      3.06  |  Q      |         |         |         |
  3+10       0.7108      3.07  |  Q      |         |         |         |
  3+15       0.7319      3.07  |  Q      |         |         |         |
  3+20       0.7531      3.08  |  Q      |         |         |         |
  3+25       0.7743      3.08  |  Q      |         |         |         |
  3+30       0.7956      3.09  |  Q      |         |         |         |
  3+35       0.8169      3.09  |  Q      |         |         |         |
  3+40       0.8383      3.10  |  QV     |         |         |         |
  3+45       0.8597      3.11  |  QV     |         |         |         |
  3+50       0.8811      3.11  |  QV     |         |         |         |
  3+55       0.9026      3.12  |  QV     |         |         |         |
  4+ 0       0.9241      3.12  |  QV     |         |         |         |
  4+ 5       0.9456      3.13  |  QV     |         |         |         |
  4+10       0.9673      3.14  |  QV     |         |         |         |
  4+15       0.9889      3.14  |  QV     |         |         |         |
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 4+20      1.0106      3.15  |  QV     |         |         |         |
 4+25      1.0323      3.16  |  Q V    |         |         |         |
 4+30      1.0541      3.16  |  Q V    |         |         |         |
 4+35      1.0759      3.17  |  Q V    |         |         |         |
 4+40      1.0978      3.18  |  Q V    |         |         |         |
 4+45      1.1197      3.18  |  Q V    |         |         |         |
 4+50      1.1417      3.19  |  Q V    |         |         |         |
 4+55      1.1637      3.20  |  Q V    |         |         |         |
 5+ 0      1.1858      3.20  |  Q V    |         |         |         |
 5+ 5      1.2079      3.21  |  Q V    |         |         |         |
 5+10      1.2300      3.22  |  Q  V   |         |         |         |
 5+15      1.2522      3.22  |  Q  V   |         |         |         |
 5+20      1.2745      3.23  |  Q  V   |         |         |         |
 5+25      1.2968      3.24  |  Q  V   |         |         |         |
 5+30      1.3191      3.25  |  Q  V   |         |         |         |
 5+35      1.3415      3.25  |  Q  V   |         |         |         |
 5+40      1.3640      3.26  |  Q  V   |         |         |         |
 5+45      1.3865      3.27  |  Q  V   |         |         |         |
 5+50      1.4090      3.27  |  Q  V   |         |         |         |
 5+55      1.4316      3.28  |  Q  V   |         |         |         |
 6+ 0      1.4543      3.29  |  Q   V  |         |         |         |
 6+ 5      1.4770      3.30  |  Q   V  |         |         |         |
 6+10      1.4998      3.31  |  Q   V  |         |         |         |
 6+15      1.5226      3.31  |  Q   V  |         |         |         |
 6+20      1.5455      3.32  |  Q   V  |         |         |         |
 6+25      1.5684      3.33  |  Q   V  |         |         |         |
 6+30      1.5914      3.34  |  Q   V  |         |         |         |
 6+35      1.6145      3.35  |  Q   V  |         |         |         |
 6+40      1.6376      3.36  |  Q    V |         |         |         |
 6+45      1.6607      3.36  |  Q    V |         |         |         |
 6+50      1.6840      3.37  |  Q    V |         |         |         |
 6+55      1.7072      3.38  |  Q    V |         |         |         |
 7+ 0      1.7306      3.39  |  Q    V |         |         |         |
 7+ 5      1.7540      3.40  |  Q    V |         |         |         |
 7+10      1.7775      3.41  |  Q    V |         |         |         |
 7+15      1.8010      3.42  |  Q    V |         |         |         |
 7+20      1.8246      3.43  |  Q    V |         |         |         |
 7+25      1.8482      3.44  |  Q     V|         |         |         |
 7+30      1.8720      3.44  |  Q     V|         |         |         |
 7+35      1.8958      3.45  |  Q     V|         |         |         |
 7+40      1.9196      3.46  |  Q     V|         |         |         |
 7+45      1.9435      3.47  |  Q     V|         |         |         |
 7+50      1.9675      3.48  |  Q     V|         |         |         |
 7+55      1.9916      3.49  |  Q     V|         |         |         |
 8+ 0      2.0157      3.50  |  Q     V|         |         |         |
 8+ 5      2.0399      3.51  |  Q     V|         |         |         |
 8+10      2.0642      3.52  |  Q      V         |         |         |
 8+15      2.0885      3.54  |  Q      V         |         |         |
 8+20      2.1130      3.55  |  Q      V         |         |         |
 8+25      2.1375      3.56  |  Q      V         |         |         |
 8+30      2.1620      3.57  |  Q      V         |         |         |
 8+35      2.1867      3.58  |  Q      V         |         |         |
 8+40      2.2114      3.59  |  Q      V         |         |         |
 8+45      2.2362      3.60  |  Q      V         |         |         |
 8+50      2.2611      3.61  |  Q       |V       |         |         |
 8+55      2.2861      3.63  |  Q       |V       |         |         |
 9+ 0      2.3111      3.64  |  Q       |V       |         |         |
 9+ 5      2.3362      3.65  |  Q       |V       |         |         |
 9+10      2.3615      3.66  |  Q       |V       |         |         |
 9+15      2.3868      3.67  |  Q       |V       |         |         |
 9+20      2.4122      3.69  |  Q       |V       |         |         |
 9+25      2.4376      3.70  |  Q       |V       |         |         |
 9+30      2.4632      3.71  |  Q       | V      |         |         |
 9+35      2.4889      3.73  |  Q       | V      |         |         |
 9+40      2.5146      3.74  |  Q       | V      |         |         |
 9+45      2.5405      3.75  |  Q       | V      |         |         |
 9+50      2.5664      3.77  |  Q       | V      |         |         |
 9+55      2.5925      3.78  |  Q       | V      |         |         |
10+ 0      2.6186      3.80  |  Q       | V      |         |         |
10+ 5      2.6449      3.81  |  Q       | V      |         |         |
10+10      2.6712      3.83  |  Q       |  V     |         |         |
```

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10+15       2.6977      3.84  |  Q       |  V       |          |          |
10+20       2.7242      3.86  |  Q       |  V       |          |          |
10+25       2.7509      3.87  |  Q       |  V       |          |          |
10+30       2.7777      3.89  |  Q       |  V       |          |          |
10+35       2.8046      3.91  |  Q       |  V       |          |          |
10+40       2.8316      3.92  |  Q       |  V       |          |          |
10+45       2.8587      3.94  |  Q       |  V       |          |          |
10+50       2.8859      3.96  |  Q       |   V      |          |          |
10+55       2.9133      3.97  |  Q       |   V      |          |          |
11+ 0       2.9408      3.99  |  Q       |   V      |          |          |
11+ 5       2.9684      4.01  |   Q      |   V      |          |          |
11+10       2.9962      4.03  |   Q      |   V      |          |          |
11+15       3.0241      4.05  |   Q      |   V      |          |          |
11+20       3.0521      4.07  |   Q      |   V      |          |          |
11+25       3.0802      4.09  |   Q      |    V     |          |          |
11+30       3.1085      4.11  |   Q      |    V     |          |          |
11+35       3.1370      4.13  |   Q      |    V     |          |          |
11+40       3.1655      4.15  |   Q      |    V     |          |          |
11+45       3.1943      4.17  |   Q      |    V     |          |          |
11+50       3.2232      4.19  |   Q      |    V     |          |          |
11+55       3.2522      4.22  |   Q      |    V     |          |          |
12+ 0       3.2814      4.24  |   Q      |     V    |          |          |
12+ 5       3.3107      4.25  |   Q      |     V    |          |          |
12+10       3.3396      4.21  |   Q      |     V    |          |          |
12+15       3.3675      4.05  |   Q      |     V    |          |          |
12+20       3.3947      3.95  |  Q       |     V    |          |          |
12+25       3.4217      3.92  |  Q       |     V    |          |          |
12+30       3.4487      3.91  |  Q       |     V    |          |          |
12+35       3.4757      3.92  |  Q       |     V    |          |          |
12+40       3.5027      3.93  |  Q       |      V   |          |          |
12+45       3.5300      3.95  |  Q       |      V   |          |          |
12+50       3.5574      3.98  |  Q       |      V   |          |          |
12+55       3.5850      4.01  |   Q      |      V   |          |          |
13+ 0       3.6128      4.05  |   Q      |      V   |          |          |
13+ 5       3.6410      4.08  |   Q      |      V   |          |          |
13+10       3.6693      4.12  |   Q      |      V   |          |          |
13+15       3.6980      4.16  |   Q      |       V  |          |          |
13+20       3.7270      4.21  |   Q      |       V  |          |          |
13+25       3.7563      4.25  |   Q      |       V  |          |          |
13+30       3.7859      4.30  |   Q      |       V  |          |          |
13+35       3.8158      4.35  |   Q      |       V  |          |          |
13+40       3.8461      4.40  |   Q      |       V  |          |          |
13+45       3.8768      4.46  |   Q      |       V  |          |          |
13+50       3.9079      4.51  |   Q      |        V |          |          |
13+55       3.9394      4.57  |   Q      |        V |          |          |
14+ 0       3.9713      4.63  |   Q      |        V |          |          |
14+ 5       4.0037      4.70  |   Q      |        V |          |          |
14+10       4.0365      4.77  |   Q      |        V |          |          |
14+15       4.0699      4.85  |   Q      |        V |          |          |
14+20       4.1038      4.92  |   Q      |         V|          |          |
14+25       4.1383      5.01  |    Q     |         V|          |          |
14+30       4.1733      5.09  |    Q     |         V|          |          |
14+35       4.2091      5.19  |    Q     |         V|          |          |
14+40       4.2454      5.28  |    Q     |         V|          |          |
14+45       4.2826      5.39  |    Q     |         V|          |          |
14+50       4.3205      5.51  |    Q     |          |V         |          |
14+55       4.3593      5.63  |    Q     |          |V         |          |
15+ 0       4.3990      5.76  |    Q     |          |V         |          |
15+ 5       4.4397      5.92  |    Q     |          |V         |          |
15+10       4.4816      6.07  |     Q    |          |V         |          |
15+15       4.5247      6.26  |     Q    |          | V        |          |
15+20       4.5691      6.46  |     Q    |          | V        |          |
15+25       4.6144      6.57  |     Q    |          | V        |          |
15+30       4.6583      6.37  |     Q    |          | V        |          |
15+35       4.6961      5.49  |    Q     |          | V        |          |
15+40       4.7302      4.95  |   Q      |          |  V       |          |
15+45       4.7646      5.00  |    Q     |          |  V       |          |
15+50       4.8010      5.29  |    Q     |          |  V       |          |
15+55       4.8419      5.94  |    Q     |          |  V       |          |
16+ 0       4.8910      7.12  |      Q   |          |  V       |          |
16+ 5       4.9682     11.21  |          |Q         |   V      |          |
```

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16+10       5.0990     18.99  |          |        Q |   V      |          |
16+15       5.3185     31.88  |          |          |    V     |Q         |
16+20       5.4894     24.81  |          |          |   Q V    |          |
16+25       5.5904     14.67  |          |    Q     |      V   |          |
16+30       5.6694     11.46  |          |  Q       |      V   |          |
16+35       5.7402     10.28  |          |Q         |       V  |          |
16+40       5.8049      9.40  |          |  Q       |       V  |          |
16+45       5.8627      8.38  |          |   Q      |       V  |          |
16+50       5.9143      7.49  |          |    Q     |       V  |          |
16+55       5.9603      6.68  |          |     Q    |        V |          |
17+ 0       6.0026      6.14  |          |     Q    |        V |          |
17+ 5       6.0430      5.87  |          |      Q   |        V |          |
17+10       6.0815      5.59  |          |      Q   |        V |          |
17+15       6.1188      5.42  |          |      Q   |        V |          |
17+20       6.1546      5.20  |          |      Q   |         V|          |
17+25       6.1888      4.96  |          |       Q  |         V|          |
17+30       6.2216      4.77  |          |       Q  |         V|          |
17+35       6.2531      4.58  |          |       Q  |         V|          |
17+40       6.2839      4.46  |          |       Q  |         V|          |
17+45       6.3138      4.35  |          |       Q  |         V|          |
17+50       6.3431      4.26  |          |       Q  |         V|          |
17+55       6.3718      4.16  |          |       Q  |          |V         |
18+ 0       6.3999      4.08  |          |       Q  |          |V         |
18+ 5       6.4275      4.02  |          |       Q  |          |V         |
18+10       6.4551      4.01  |          |       Q  |          |V         |
18+15       6.4835      4.12  |          |       Q  |          |V         |
18+20       6.5124      4.19  |          |       Q  |          |V         |
18+25       6.5413      4.19  |          |       Q  |          |V         |
18+30       6.5700      4.18  |          |       Q  |          | V        |
18+35       6.5987      4.16  |          |       Q  |          | V        |
18+40       6.6271      4.13  |          |       Q  |          | V        |
18+45       6.6554      4.10  |          |       Q  |          | V        |
18+50       6.6834      4.07  |          |       Q  |          | V        |
18+55       6.7112      4.03  |          |       Q  |          | V        |
19+ 0       6.7387      4.00  |          |      Q   |          | V        |
19+ 5       6.7660      3.96  |          |      Q   |          |  V       |
19+10       6.7931      3.93  |          |      Q   |          |  V       |
19+15       6.8199      3.90  |          |      Q   |          |  V       |
19+20       6.8465      3.87  |          |      Q   |          |  V       |
19+25       6.8730      3.84  |          |      Q   |          |  V       |
19+30       6.8992      3.81  |          |      Q   |          |  V       |
19+35       6.9252      3.78  |          |      Q   |          |  V       |
19+40       6.9510      3.75  |          |      Q   |          |  V       |
19+45       6.9767      3.72  |          |      Q   |          |   V      |
19+50       7.0021      3.70  |          |      Q   |          |   V      |
19+55       7.0274      3.67  |          |      Q   |          |   V      |
20+ 0       7.0525      3.65  |          |      Q   |          |   V      |
20+ 5       7.0774      3.62  |          |      Q   |          |   V      |
20+10       7.1022      3.60  |          |      Q   |          |   V      |
20+15       7.1268      3.58  |          |      Q   |          |   V      |
20+20       7.1513      3.55  |          |      Q   |          |   V      |
20+25       7.1756      3.53  |          |      Q   |          |    V     |
20+30       7.1998      3.51  |          |      Q   |          |    V     |
20+35       7.2238      3.49  |          |      Q   |          |    V     |
20+40       7.2477      3.47  |          |      Q   |          |    V     |
20+45       7.2715      3.45  |          |      Q   |          |    V     |
20+50       7.2952      3.43  |          |      Q   |          |    V     |
20+55       7.3187      3.41  |          |      Q   |          |    V     |
21+ 0       7.3420      3.40  |          |      Q   |          |    V     |
21+ 5       7.3653      3.38  |          |      Q   |          |    V     |
21+10       7.3885      3.36  |          |      Q   |          |     V    |
21+15       7.4115      3.34  |          |      Q   |          |     V    |
21+20       7.4344      3.33  |          |      Q   |          |     V    |
21+25       7.4572      3.31  |          |      Q   |          |     V    |
21+30       7.4799      3.30  |          |      Q   |          |     V    |
21+35       7.5025      3.28  |          |      Q   |          |     V    |
21+40       7.5250      3.26  |          |      Q   |          |     V    |
21+45       7.5474      3.25  |          |      Q   |          |     V    |
21+50       7.5696      3.24  |          |      Q   |          |     V    |
21+55       7.5918      3.22  |          |      Q   |          |      V   |
22+ 0       7.6139      3.21  |          |      Q   |          |      V   |
```

```
  22+ 5       7.6359      3.19  |  Q      |         |         |      V  |
  22+10       7.6578      3.18  |  Q      |         |         |      V  |
  22+15       7.6796      3.17  |  Q      |         |         |      V  |
  22+20       7.7013      3.15  |  Q      |         |         |      V  |
  22+25       7.7230      3.14  |  Q      |         |         |      V  |
  22+30       7.7445      3.13  |  Q      |         |         |      V  |
  22+35       7.7660      3.12  |  Q      |         |         |      V  |
  22+40       7.7874      3.10  |  Q      |         |         |       V |
  22+45       7.8087      3.09  |  Q      |         |         |       V |
  22+50       7.8299      3.08  |  Q      |         |         |       V |
  22+55       7.8510      3.07  |  Q      |         |         |       V |
  23+ 0       7.8721      3.06  |  Q      |         |         |       V |
  23+ 5       7.8930      3.05  |  Q      |         |         |       V |
  23+10       7.9140      3.04  |  Q      |         |         |       V |
  23+15       7.9348      3.02  |  Q      |         |         |       V |
  23+20       7.9555      3.01  |  Q      |         |         |       V |
  23+25       7.9762      3.00  |  Q      |         |         |       V |
  23+30       7.9968      2.99  | Q       |         |         |        V|
  23+35       8.0174      2.98  | Q       |         |         |        V|
  23+40       8.0379      2.97  | Q       |         |         |        V|
  23+45       8.0583      2.96  | Q       |         |         |        V|
  23+50       8.0786      2.95  | Q       |         |         |        V|
  23+55       8.0989      2.94  | Q       |         |         |        V|
  24+ 0       8.1191      2.93  | Q       |         |         |        V|
  24+ 5       8.1386      2.84  | Q       |         |         |        V|
  24+10       8.1558      2.49  | Q       |         |         |        V|
  24+15       8.1667      1.59  |Q        |         |         |        V|
  24+20       8.1731      0.93  Q         |         |         |        V|
  24+25       8.1775      0.63  Q         |         |         |        V|
  24+30       8.1805      0.44  Q         |         |         |        V|
  24+35       8.1825      0.30  Q         |         |         |        V|
  24+40       8.1839      0.20  Q         |         |         |        V|
  24+45       8.1848      0.13  Q         |         |         |        V|
  24+50       8.1853      0.08  Q         |         |         |        V|
  24+55       8.1857      0.06  Q         |         |         |        V|
  25+ 0       8.1860      0.04  Q         |         |         |        V|
  25+ 5       8.1862      0.03  Q         |         |         |        V|
  25+10       8.1864      0.02  Q         |         |         |        V|
  25+15       8.1865      0.01  Q         |         |         |        V|
  25+20       8.1865      0.01  Q         |         |         |        V|
  25+25       8.1865      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

Area ‘E’ – 2 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'E'
2 YEAR 24 HOUR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------

        Storm Event Year = 2

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            36.66            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 74.9      56.9         36.66      1.000     0.722    1.000    0.722

Area-averaged adjusted loss rate Fm (In/Hr) =  0.722

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
36.66	1.000	74.9	56.9	7.58	0.153

Area-averaged catchment yield fraction, Y = 0.153
Area-averaged low loss fraction, Yb = 0.847
User entry of time of concentration = 0.293 (hours)
++
Watershed area = 36.66(Ac.)
Catchment Lag time = 0.234 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.5518
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.722(In/Hr)
Average low loss rate fraction (Yb) = 0.847 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 36.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.308(In)
30-minute factor = 0.998 Adjusted rainfall = 0.527(In)
1-hour factor = 0.998 Adjusted rainfall = 0.649(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 443.36 (CFS))	
1	2.675	11.860
2	12.024	41.451
3	35.644	104.718
4	63.026	121.402
5	74.204	49.558
6	81.479	32.252
7	86.684	23.079
8	90.577	17.258
9	93.485	12.896
10	95.602	9.386
11	97.088	6.587
12	97.988	3.990
13	98.429	1.953
14	98.799	1.644
15	99.093	1.300
16	99.316	0.991
17	99.592	1.221
18	99.789	0.873
19	99.913	0.549
20	100.000	0.388

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3081	0.3081
2	0.3794	0.0712
3	0.4284	0.0491
4	0.4671	0.0386
5	0.4994	0.0323
6	0.5275	0.0281

7	0.5524	0.0250
8	0.5750	0.0226
9	0.5957	0.0207
10	0.6148	0.0191
11	0.6327	0.0178
12	0.6494	0.0167
13	0.6829	0.0335
14	0.7154	0.0325
15	0.7471	0.0317
16	0.7780	0.0309
17	0.8082	0.0302
18	0.8378	0.0295
19	0.8667	0.0289
20	0.8951	0.0284
21	0.9230	0.0279
22	0.9503	0.0274
23	0.9773	0.0269
24	1.0037	0.0265
25	1.0298	0.0261
26	1.0555	0.0257
27	1.0808	0.0253
28	1.1058	0.0250
29	1.1304	0.0246
30	1.1548	0.0243
31	1.1788	0.0240
32	1.2026	0.0237
33	1.2260	0.0235
34	1.2492	0.0232
35	1.2722	0.0230
36	1.2949	0.0227
37	1.3173	0.0224
38	1.3396	0.0222
39	1.3616	0.0220
40	1.3833	0.0218
41	1.4049	0.0216
42	1.4263	0.0214
43	1.4475	0.0212
44	1.4685	0.0210
45	1.4894	0.0208
46	1.5100	0.0207
47	1.5305	0.0205
48	1.5509	0.0203
49	1.5710	0.0202
50	1.5911	0.0200
51	1.6109	0.0199
52	1.6307	0.0197
53	1.6503	0.0196
54	1.6697	0.0195
55	1.6890	0.0193
56	1.7082	0.0192
57	1.7273	0.0191
58	1.7462	0.0189
59	1.7651	0.0188
60	1.7838	0.0187
61	1.8023	0.0186
62	1.8208	0.0185
63	1.8392	0.0184
64	1.8574	0.0182
65	1.8756	0.0181
66	1.8936	0.0180
67	1.9115	0.0179
68	1.9294	0.0178
69	1.9471	0.0177
70	1.9648	0.0176
71	1.9823	0.0176
72	1.9998	0.0175
73	2.0136	0.0138
74	2.0274	0.0137
75	2.0410	0.0137
76	2.0546	0.0136
77	2.0680	0.0135

78	2.0814	0.0134
79	2.0947	0.0133
80	2.1080	0.0132
81	2.1211	0.0131
82	2.1341	0.0131
83	2.1471	0.0130
84	2.1600	0.0129
85	2.1728	0.0128
86	2.1856	0.0127
87	2.1983	0.0127
88	2.2109	0.0126
89	2.2234	0.0125
90	2.2358	0.0125
91	2.2482	0.0124
92	2.2605	0.0123
93	2.2728	0.0123
94	2.2850	0.0122
95	2.2971	0.0121
96	2.3092	0.0121
97	2.3212	0.0120
98	2.3331	0.0119
99	2.3450	0.0119
100	2.3568	0.0118
101	2.3685	0.0118
102	2.3802	0.0117
103	2.3919	0.0116
104	2.4035	0.0116
105	2.4150	0.0115
106	2.4265	0.0115
107	2.4379	0.0114
108	2.4493	0.0114
109	2.4606	0.0113
110	2.4718	0.0113
111	2.4830	0.0112
112	2.4942	0.0112
113	2.5053	0.0111
114	2.5164	0.0111
115	2.5274	0.0110
116	2.5384	0.0110
117	2.5493	0.0109
118	2.5602	0.0109
119	2.5710	0.0108
120	2.5818	0.0108
121	2.5925	0.0107
122	2.6032	0.0107
123	2.6138	0.0106
124	2.6244	0.0106
125	2.6350	0.0106
126	2.6455	0.0105
127	2.6560	0.0105
128	2.6664	0.0104
129	2.6768	0.0104
130	2.6872	0.0104
131	2.6975	0.0103
132	2.7078	0.0103
133	2.7180	0.0102
134	2.7282	0.0102
135	2.7384	0.0102
136	2.7485	0.0101
137	2.7586	0.0101
138	2.7686	0.0101
139	2.7787	0.0100
140	2.7886	0.0100
141	2.7986	0.0099
142	2.8085	0.0099
143	2.8184	0.0099
144	2.8282	0.0098
145	2.8380	0.0098
146	2.8478	0.0098
147	2.8575	0.0097
148	2.8672	0.0097

149	2.8769	0.0097
150	2.8865	0.0096
151	2.8961	0.0096
152	2.9057	0.0096
153	2.9153	0.0095
154	2.9248	0.0095
155	2.9342	0.0095
156	2.9437	0.0095
157	2.9531	0.0094
158	2.9625	0.0094
159	2.9719	0.0094
160	2.9812	0.0093
161	2.9905	0.0093
162	2.9998	0.0093
163	3.0090	0.0092
164	3.0182	0.0092
165	3.0274	0.0092
166	3.0366	0.0092
167	3.0457	0.0091
168	3.0548	0.0091
169	3.0639	0.0091
170	3.0730	0.0091
171	3.0820	0.0090
172	3.0910	0.0090
173	3.1000	0.0090
174	3.1089	0.0089
175	3.1178	0.0089
176	3.1267	0.0089
177	3.1356	0.0089
178	3.1444	0.0088
179	3.1533	0.0088
180	3.1621	0.0088
181	3.1708	0.0088
182	3.1796	0.0087
183	3.1883	0.0087
184	3.1970	0.0087
185	3.2057	0.0087
186	3.2143	0.0087
187	3.2230	0.0086
188	3.2316	0.0086
189	3.2402	0.0086
190	3.2487	0.0086
191	3.2573	0.0085
192	3.2658	0.0085
193	3.2743	0.0085
194	3.2827	0.0085
195	3.2912	0.0085
196	3.2996	0.0084
197	3.3080	0.0084
198	3.3164	0.0084
199	3.3248	0.0084
200	3.3331	0.0083
201	3.3414	0.0083
202	3.3497	0.0083
203	3.3580	0.0083
204	3.3663	0.0083
205	3.3745	0.0082
206	3.3828	0.0082
207	3.3910	0.0082
208	3.3991	0.0082
209	3.4073	0.0082
210	3.4154	0.0081
211	3.4236	0.0081
212	3.4317	0.0081
213	3.4398	0.0081
214	3.4478	0.0081
215	3.4559	0.0080
216	3.4639	0.0080
217	3.4719	0.0080
218	3.4799	0.0080
219	3.4879	0.0080

220	3.4958	0.0080
221	3.5038	0.0079
222	3.5117	0.0079
223	3.5196	0.0079
224	3.5275	0.0079
225	3.5353	0.0079
226	3.5432	0.0078
227	3.5510	0.0078
228	3.5588	0.0078
229	3.5666	0.0078
230	3.5744	0.0078
231	3.5822	0.0078
232	3.5899	0.0077
233	3.5976	0.0077
234	3.6053	0.0077
235	3.6130	0.0077
236	3.6207	0.0077
237	3.6284	0.0077
238	3.6360	0.0076
239	3.6437	0.0076
240	3.6513	0.0076
241	3.6589	0.0076
242	3.6665	0.0076
243	3.6740	0.0076
244	3.6816	0.0076
245	3.6891	0.0075
246	3.6966	0.0075
247	3.7042	0.0075
248	3.7116	0.0075
249	3.7191	0.0075
250	3.7266	0.0075
251	3.7340	0.0074
252	3.7415	0.0074
253	3.7489	0.0074
254	3.7563	0.0074
255	3.7637	0.0074
256	3.7710	0.0074
257	3.7784	0.0074
258	3.7857	0.0073
259	3.7931	0.0073
260	3.8004	0.0073
261	3.8077	0.0073
262	3.8150	0.0073
263	3.8223	0.0073
264	3.8295	0.0073
265	3.8368	0.0072
266	3.8440	0.0072
267	3.8512	0.0072
268	3.8584	0.0072
269	3.8656	0.0072
270	3.8728	0.0072
271	3.8800	0.0072
272	3.8871	0.0072
273	3.8943	0.0071
274	3.9014	0.0071
275	3.9085	0.0071
276	3.9156	0.0071
277	3.9227	0.0071
278	3.9298	0.0071
279	3.9368	0.0071
280	3.9439	0.0070
281	3.9509	0.0070
282	3.9579	0.0070
283	3.9649	0.0070
284	3.9719	0.0070
285	3.9789	0.0070
286	3.9859	0.0070
287	3.9929	0.0070
288	3.9998	0.0070

Unit	Unit	Unit	Effective

Period (number)	Rainfall (In)	Soil-Loss (In)	Rainfall (In)
1	0.0070	0.0059	0.0011
2	0.0070	0.0059	0.0011
3	0.0070	0.0059	0.0011
4	0.0070	0.0059	0.0011
5	0.0070	0.0059	0.0011
6	0.0070	0.0060	0.0011
7	0.0071	0.0060	0.0011
8	0.0071	0.0060	0.0011
9	0.0071	0.0060	0.0011
10	0.0071	0.0060	0.0011
11	0.0071	0.0060	0.0011
12	0.0072	0.0061	0.0011
13	0.0072	0.0061	0.0011
14	0.0072	0.0061	0.0011
15	0.0072	0.0061	0.0011
16	0.0072	0.0061	0.0011
17	0.0073	0.0061	0.0011
18	0.0073	0.0062	0.0011
19	0.0073	0.0062	0.0011
20	0.0073	0.0062	0.0011
21	0.0073	0.0062	0.0011
22	0.0074	0.0062	0.0011
23	0.0074	0.0063	0.0011
24	0.0074	0.0063	0.0011
25	0.0074	0.0063	0.0011
26	0.0074	0.0063	0.0011
27	0.0075	0.0063	0.0011
28	0.0075	0.0063	0.0011
29	0.0075	0.0064	0.0012
30	0.0075	0.0064	0.0012
31	0.0076	0.0064	0.0012
32	0.0076	0.0064	0.0012
33	0.0076	0.0064	0.0012
34	0.0076	0.0065	0.0012
35	0.0077	0.0065	0.0012
36	0.0077	0.0065	0.0012
37	0.0077	0.0065	0.0012
38	0.0077	0.0065	0.0012
39	0.0078	0.0066	0.0012
40	0.0078	0.0066	0.0012
41	0.0078	0.0066	0.0012
42	0.0078	0.0066	0.0012
43	0.0079	0.0067	0.0012
44	0.0079	0.0067	0.0012
45	0.0079	0.0067	0.0012
46	0.0079	0.0067	0.0012
47	0.0080	0.0068	0.0012
48	0.0080	0.0068	0.0012
49	0.0080	0.0068	0.0012
50	0.0080	0.0068	0.0012
51	0.0081	0.0068	0.0012
52	0.0081	0.0069	0.0012
53	0.0081	0.0069	0.0012
54	0.0082	0.0069	0.0013
55	0.0082	0.0069	0.0013
56	0.0082	0.0070	0.0013
57	0.0083	0.0070	0.0013
58	0.0083	0.0070	0.0013
59	0.0083	0.0070	0.0013
60	0.0083	0.0071	0.0013
61	0.0084	0.0071	0.0013
62	0.0084	0.0071	0.0013
63	0.0085	0.0072	0.0013
64	0.0085	0.0072	0.0013
65	0.0085	0.0072	0.0013
66	0.0085	0.0072	0.0013
67	0.0086	0.0073	0.0013
68	0.0086	0.0073	0.0013

69	0.0087	0.0073	0.0013
70	0.0087	0.0073	0.0013
71	0.0087	0.0074	0.0013
72	0.0087	0.0074	0.0013
73	0.0088	0.0074	0.0013
74	0.0088	0.0075	0.0014
75	0.0089	0.0075	0.0014
76	0.0089	0.0075	0.0014
77	0.0089	0.0076	0.0014
78	0.0090	0.0076	0.0014
79	0.0090	0.0076	0.0014
80	0.0091	0.0077	0.0014
81	0.0091	0.0077	0.0014
82	0.0091	0.0077	0.0014
83	0.0092	0.0078	0.0014
84	0.0092	0.0078	0.0014
85	0.0093	0.0079	0.0014
86	0.0093	0.0079	0.0014
87	0.0094	0.0079	0.0014
88	0.0094	0.0080	0.0014
89	0.0095	0.0080	0.0014
90	0.0095	0.0080	0.0015
91	0.0095	0.0081	0.0015
92	0.0096	0.0081	0.0015
93	0.0096	0.0082	0.0015
94	0.0097	0.0082	0.0015
95	0.0097	0.0082	0.0015
96	0.0098	0.0083	0.0015
97	0.0098	0.0083	0.0015
98	0.0099	0.0084	0.0015
99	0.0099	0.0084	0.0015
100	0.0100	0.0084	0.0015
101	0.0101	0.0085	0.0015
102	0.0101	0.0085	0.0015
103	0.0102	0.0086	0.0016
104	0.0102	0.0086	0.0016
105	0.0103	0.0087	0.0016
106	0.0103	0.0087	0.0016
107	0.0104	0.0088	0.0016
108	0.0104	0.0088	0.0016
109	0.0105	0.0089	0.0016
110	0.0106	0.0089	0.0016
111	0.0106	0.0090	0.0016
112	0.0107	0.0091	0.0016
113	0.0108	0.0091	0.0017
114	0.0108	0.0092	0.0017
115	0.0109	0.0092	0.0017
116	0.0110	0.0093	0.0017
117	0.0111	0.0094	0.0017
118	0.0111	0.0094	0.0017
119	0.0112	0.0095	0.0017
120	0.0113	0.0095	0.0017
121	0.0114	0.0096	0.0017
122	0.0114	0.0097	0.0018
123	0.0115	0.0098	0.0018
124	0.0116	0.0098	0.0018
125	0.0117	0.0099	0.0018
126	0.0118	0.0100	0.0018
127	0.0119	0.0101	0.0018
128	0.0119	0.0101	0.0018
129	0.0121	0.0102	0.0018
130	0.0121	0.0103	0.0019
131	0.0123	0.0104	0.0019
132	0.0123	0.0104	0.0019
133	0.0125	0.0105	0.0019
134	0.0125	0.0106	0.0019
135	0.0127	0.0107	0.0019
136	0.0127	0.0108	0.0020
137	0.0129	0.0109	0.0020
138	0.0130	0.0110	0.0020
139	0.0131	0.0111	0.0020

140	0.0132	0.0112	0.0020
141	0.0134	0.0113	0.0021
142	0.0135	0.0114	0.0021
143	0.0137	0.0116	0.0021
144	0.0137	0.0116	0.0021
145	0.0175	0.0148	0.0027
146	0.0176	0.0149	0.0027
147	0.0177	0.0150	0.0027
148	0.0178	0.0151	0.0027
149	0.0180	0.0153	0.0028
150	0.0181	0.0154	0.0028
151	0.0184	0.0155	0.0028
152	0.0185	0.0156	0.0028
153	0.0187	0.0158	0.0029
154	0.0188	0.0159	0.0029
155	0.0191	0.0161	0.0029
156	0.0192	0.0162	0.0029
157	0.0195	0.0165	0.0030
158	0.0196	0.0166	0.0030
159	0.0199	0.0168	0.0030
160	0.0200	0.0170	0.0031
161	0.0203	0.0172	0.0031
162	0.0205	0.0174	0.0031
163	0.0208	0.0176	0.0032
164	0.0210	0.0178	0.0032
165	0.0214	0.0181	0.0033
166	0.0216	0.0183	0.0033
167	0.0220	0.0186	0.0034
168	0.0222	0.0188	0.0034
169	0.0227	0.0192	0.0035
170	0.0230	0.0194	0.0035
171	0.0235	0.0199	0.0036
172	0.0237	0.0201	0.0036
173	0.0243	0.0206	0.0037
174	0.0246	0.0209	0.0038
175	0.0253	0.0214	0.0039
176	0.0257	0.0218	0.0039
177	0.0265	0.0224	0.0041
178	0.0269	0.0228	0.0041
179	0.0279	0.0236	0.0043
180	0.0284	0.0240	0.0043
181	0.0295	0.0250	0.0045
182	0.0302	0.0256	0.0046
183	0.0317	0.0268	0.0049
184	0.0325	0.0276	0.0050
185	0.0167	0.0142	0.0026
186	0.0178	0.0151	0.0027
187	0.0207	0.0175	0.0032
188	0.0226	0.0191	0.0035
189	0.0281	0.0238	0.0043
190	0.0323	0.0274	0.0050
191	0.0491	0.0416	0.0075
192	0.0712	0.0602	0.0110
193	0.3081	0.0602	0.2480
194	0.0386	0.0327	0.0059
195	0.0250	0.0211	0.0038
196	0.0191	0.0162	0.0029
197	0.0335	0.0284	0.0051
198	0.0309	0.0262	0.0047
199	0.0289	0.0245	0.0044
200	0.0274	0.0232	0.0042
201	0.0261	0.0221	0.0040
202	0.0250	0.0211	0.0038
203	0.0240	0.0204	0.0037
204	0.0232	0.0197	0.0036
205	0.0224	0.0190	0.0034
206	0.0218	0.0184	0.0033
207	0.0212	0.0180	0.0032
208	0.0207	0.0175	0.0032
209	0.0202	0.0171	0.0031
210	0.0197	0.0167	0.0030

211	0.0193	0.0164	0.0030
212	0.0189	0.0160	0.0029
213	0.0186	0.0157	0.0028
214	0.0182	0.0155	0.0028
215	0.0179	0.0152	0.0027
216	0.0176	0.0149	0.0027
217	0.0138	0.0117	0.0021
218	0.0136	0.0115	0.0021
219	0.0133	0.0113	0.0020
220	0.0131	0.0111	0.0020
221	0.0128	0.0109	0.0020
222	0.0126	0.0107	0.0019
223	0.0124	0.0105	0.0019
224	0.0122	0.0103	0.0019
225	0.0120	0.0102	0.0018
226	0.0118	0.0100	0.0018
227	0.0116	0.0099	0.0018
228	0.0115	0.0097	0.0018
229	0.0113	0.0096	0.0017
230	0.0112	0.0095	0.0017
231	0.0110	0.0093	0.0017
232	0.0109	0.0092	0.0017
233	0.0107	0.0091	0.0016
234	0.0106	0.0090	0.0016
235	0.0105	0.0089	0.0016
236	0.0104	0.0088	0.0016
237	0.0102	0.0087	0.0016
238	0.0101	0.0086	0.0016
239	0.0100	0.0085	0.0015
240	0.0099	0.0084	0.0015
241	0.0098	0.0083	0.0015
242	0.0097	0.0082	0.0015
243	0.0096	0.0081	0.0015
244	0.0095	0.0081	0.0015
245	0.0094	0.0080	0.0014
246	0.0093	0.0079	0.0014
247	0.0092	0.0078	0.0014
248	0.0092	0.0078	0.0014
249	0.0091	0.0077	0.0014
250	0.0090	0.0076	0.0014
251	0.0089	0.0076	0.0014
252	0.0088	0.0075	0.0014
253	0.0088	0.0074	0.0013
254	0.0087	0.0074	0.0013
255	0.0086	0.0073	0.0013
256	0.0086	0.0072	0.0013
257	0.0085	0.0072	0.0013
258	0.0084	0.0071	0.0013
259	0.0084	0.0071	0.0013
260	0.0083	0.0070	0.0013
261	0.0082	0.0070	0.0013
262	0.0082	0.0069	0.0013
263	0.0081	0.0069	0.0012
264	0.0081	0.0068	0.0012
265	0.0080	0.0068	0.0012
266	0.0080	0.0067	0.0012
267	0.0079	0.0067	0.0012
268	0.0078	0.0066	0.0012
269	0.0078	0.0066	0.0012
270	0.0077	0.0066	0.0012
271	0.0077	0.0065	0.0012
272	0.0076	0.0065	0.0012
273	0.0076	0.0064	0.0012
274	0.0076	0.0064	0.0012
275	0.0075	0.0064	0.0012
276	0.0075	0.0063	0.0011
277	0.0074	0.0063	0.0011
278	0.0074	0.0062	0.0011
279	0.0073	0.0062	0.0011
280	0.0073	0.0062	0.0011
281	0.0072	0.0061	0.0011

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      282              0.0072           0.0061              0.0011
      283              0.0072           0.0061              0.0011
      284              0.0071           0.0060              0.0011
      285              0.0071           0.0060              0.0011
      286              0.0070           0.0060              0.0011
      287              0.0070           0.0059              0.0011
      288              0.0070           0.0059              0.0011
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      3.19(In)
      Total effective rainfall =      0.81(In)
      Peak flow rate in flood hydrograph =     32.04(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       10.0      20.0      30.0      40.0
---------------------------------------------------------------------------
  0+ 5       0.0001      0.01  Q         |         |         |         |
  0+10       0.0005      0.06  Q         |         |         |         |
  0+15       0.0016      0.17  Q         |         |         |         |
  0+20       0.0037      0.30  Q         |         |         |         |
  0+25       0.0061      0.35  Q         |         |         |         |
  0+30       0.0088      0.39  Q         |         |         |         |
  0+35       0.0116      0.41  Q         |         |         |         |
  0+40       0.0146      0.43  Q         |         |         |         |
  0+45       0.0177      0.45  Q         |         |         |         |
  0+50       0.0208      0.46  Q         |         |         |         |
  0+55       0.0240      0.47  Q         |         |         |         |
  1+ 0       0.0273      0.47  Q         |         |         |         |
  1+ 5       0.0306      0.48  Q         |         |         |         |
  1+10       0.0339      0.48  Q         |         |         |         |
  1+15       0.0372      0.48  Q         |         |         |         |
  1+20       0.0405      0.48  Q         |         |         |         |
  1+25       0.0438      0.49  Q         |         |         |         |
  1+30       0.0472      0.49  Q         |         |         |         |
  1+35       0.0506      0.49  Q         |         |         |         |
  1+40       0.0540      0.49  Q         |         |         |         |
  1+45       0.0574      0.49  Q         |         |         |         |
  1+50       0.0608      0.49  Q         |         |         |         |
  1+55       0.0642      0.50  QV        |         |         |         |
  2+ 0       0.0676      0.50  QV        |         |         |         |
  2+ 5       0.0711      0.50  QV        |         |         |         |
  2+10       0.0745      0.50  QV        |         |         |         |
  2+15       0.0780      0.50  QV        |         |         |         |
  2+20       0.0814      0.50  QV        |         |         |         |
  2+25       0.0849      0.51  QV        |         |         |         |
  2+30       0.0884      0.51  QV        |         |         |         |
  2+35       0.0919      0.51  QV        |         |         |         |
  2+40       0.0954      0.51  QV        |         |         |         |
  2+45       0.0989      0.51  QV        |         |         |         |
  2+50       0.1025      0.51  QV        |         |         |         |
  2+55       0.1060      0.51  QV        |         |         |         |
  3+ 0       0.1096      0.52  QV        |         |         |         |
  3+ 5       0.1131      0.52  QV        |         |         |         |
  3+10       0.1167      0.52  QV        |         |         |         |
  3+15       0.1203      0.52  QV        |         |         |         |
  3+20       0.1239      0.52  QV        |         |         |         |
  3+25       0.1275      0.52  Q V       |         |         |         |
  3+30       0.1311      0.53  Q V       |         |         |         |
  3+35       0.1348      0.53  Q V       |         |         |         |
  3+40       0.1384      0.53  Q V       |         |         |         |
  3+45       0.1421      0.53  Q V       |         |         |         |
  3+50       0.1457      0.53  Q V       |         |         |         |
  3+55       0.1494      0.53  Q V       |         |         |         |
  4+ 0       0.1531      0.54  Q V       |         |         |         |
  4+ 5       0.1568      0.54  Q V       |         |         |         |
```

```
 4+10      0.1605      0.54  Q V       |         |         |         |
 4+15      0.1643      0.54  Q V       |         |         |         |
 4+20      0.1680      0.54  Q V       |         |         |         |
 4+25      0.1718      0.55  Q V       |         |         |         |
 4+30      0.1755      0.55  Q V       |         |         |         |
 4+35      0.1793      0.55  Q V       |         |         |         |
 4+40      0.1831      0.55  Q V       |         |         |         |
 4+45      0.1869      0.55  Q  V      |         |         |         |
 4+50      0.1908      0.56  Q  V      |         |         |         |
 4+55      0.1946      0.56  Q  V      |         |         |         |
 5+ 0      0.1985      0.56  Q  V      |         |         |         |
 5+ 5      0.2023      0.56  Q  V      |         |         |         |
 5+10      0.2062      0.56  Q  V      |         |         |         |
 5+15      0.2101      0.57  Q  V      |         |         |         |
 5+20      0.2140      0.57  Q  V      |         |         |         |
 5+25      0.2179      0.57  Q  V      |         |         |         |
 5+30      0.2219      0.57  Q  V      |         |         |         |
 5+35      0.2258      0.57  Q  V      |         |         |         |
 5+40      0.2298      0.58  Q  V      |         |         |         |
 5+45      0.2338      0.58  Q  V      |         |         |         |
 5+50      0.2378      0.58  Q  V      |         |         |         |
 5+55      0.2418      0.58  Q  V      |         |         |         |
 6+ 0      0.2458      0.59  Q  V      |         |         |         |
 6+ 5      0.2499      0.59  Q   V     |         |         |         |
 6+10      0.2540      0.59  Q   V     |         |         |         |
 6+15      0.2581      0.59  Q   V     |         |         |         |
 6+20      0.2622      0.60  Q   V     |         |         |         |
 6+25      0.2663      0.60  Q   V     |         |         |         |
 6+30      0.2704      0.60  Q   V     |         |         |         |
 6+35      0.2746      0.60  Q   V     |         |         |         |
 6+40      0.2787      0.61  Q   V     |         |         |         |
 6+45      0.2829      0.61  Q   V     |         |         |         |
 6+50      0.2871      0.61  Q   V     |         |         |         |
 6+55      0.2914      0.61  Q   V     |         |         |         |
 7+ 0      0.2956      0.62  Q   V     |         |         |         |
 7+ 5      0.2999      0.62  Q   V     |         |         |         |
 7+10      0.3041      0.62  Q   V     |         |         |         |
 7+15      0.3084      0.62  Q   V     |         |         |         |
 7+20      0.3128      0.63  Q    V    |         |         |         |
 7+25      0.3171      0.63  Q    V    |         |         |         |
 7+30      0.3215      0.63  Q    V    |         |         |         |
 7+35      0.3259      0.64  Q    V    |         |         |         |
 7+40      0.3303      0.64  Q    V    |         |         |         |
 7+45      0.3347      0.64  Q    V    |         |         |         |
 7+50      0.3391      0.65  Q    V    |         |         |         |
 7+55      0.3436      0.65  Q    V    |         |         |         |
 8+ 0      0.3481      0.65  Q    V    |         |         |         |
 8+ 5      0.3526      0.66  Q    V    |         |         |         |
 8+10      0.3571      0.66  Q    V    |         |         |         |
 8+15      0.3617      0.66  Q    V    |         |         |         |
 8+20      0.3663      0.67  Q    V    |         |         |         |
 8+25      0.3709      0.67  Q    V    |         |         |         |
 8+30      0.3755      0.67  Q     V   |         |         |         |
 8+35      0.3802      0.68  Q     V   |         |         |         |
 8+40      0.3849      0.68  Q     V   |         |         |         |
 8+45      0.3896      0.68  Q     V   |         |         |         |
 8+50      0.3943      0.69  Q     V   |         |         |         |
 8+55      0.3991      0.69  Q     V   |         |         |         |
 9+ 0      0.4038      0.69  Q     V   |         |         |         |
 9+ 5      0.4087      0.70  Q     V   |         |         |         |
 9+10      0.4135      0.70  Q     V   |         |         |         |
 9+15      0.4184      0.71  Q     V   |         |         |         |
 9+20      0.4233      0.71  Q     V   |         |         |         |
 9+25      0.4282      0.72  Q     V   |         |         |         |
 9+30      0.4331      0.72  Q     V   |         |         |         |
 9+35      0.4381      0.72  Q      V  |         |         |         |
 9+40      0.4432      0.73  Q      V  |         |         |         |
 9+45      0.4482      0.73  Q      V  |         |         |         |
 9+50      0.4533      0.74  Q      V  |         |         |         |
 9+55      0.4584      0.74  Q      V  |         |         |         |
10+ 0      0.4635      0.75  Q      V  |         |         |         |
```

```
10+ 5       0.4687      0.75  Q      V  |          |          |          |
10+10       0.4739      0.76  Q      V  |          |          |          |
10+15       0.4792      0.76  Q      V  |          |          |          |
10+20       0.4845      0.77  Q      V  |          |          |          |
10+25       0.4898      0.77  Q      V  |          |          |          |
10+30       0.4952      0.78  Q      V  |          |          |          |
10+35       0.5006      0.78  Q       V |          |          |          |
10+40       0.5060      0.79  Q       V |          |          |          |
10+45       0.5115      0.80  Q       V |          |          |          |
10+50       0.5170      0.80  Q       V |          |          |          |
10+55       0.5226      0.81  Q       V |          |          |          |
11+ 0       0.5282      0.81  Q       V |          |          |          |
11+ 5       0.5338      0.82  Q       V |          |          |          |
11+10       0.5395      0.83  Q       V |          |          |          |
11+15       0.5453      0.83  Q       V |          |          |          |
11+20       0.5511      0.84  Q       V |          |          |          |
11+25       0.5569      0.85  Q       V |          |          |          |
11+30       0.5628      0.85  Q        V|          |          |          |
11+35       0.5687      0.86  Q        V|          |          |          |
11+40       0.5747      0.87  Q        V|          |          |          |
11+45       0.5808      0.88  Q        V|          |          |          |
11+50       0.5869      0.89  Q        V|          |          |          |
11+55       0.5930      0.89  Q        V|          |          |          |
12+ 0       0.5992      0.90  Q        V|          |          |          |
12+ 5       0.6055      0.92  Q        V|          |          |          |
12+10       0.6121      0.95  Q        V|          |          |          |
12+15       0.6191      1.01  |Q       V|          |          |          |
12+20       0.6266      1.09  |Q        V          |          |          |
12+25       0.6343      1.13  |Q        V          |          |          |
12+30       0.6423      1.15  |Q        V          |          |          |
12+35       0.6504      1.18  |Q        V          |          |          |
12+40       0.6586      1.19  |Q        V          |          |          |
12+45       0.6669      1.21  |Q        V          |          |          |
12+50       0.6754      1.23  |Q        V          |          |          |
12+55       0.6839      1.24  |Q         |V         |          |          |
13+ 0       0.6926      1.26  |Q         |V         |          |          |
13+ 5       0.7013      1.27  |Q         |V         |          |          |
13+10       0.7102      1.28  |Q         |V         |          |          |
13+15       0.7191      1.30  |Q         |V         |          |          |
13+20       0.7281      1.31  |Q         |V         |          |          |
13+25       0.7372      1.32  |Q         |V         |          |          |
13+30       0.7464      1.34  |Q         | V        |          |          |
13+35       0.7558      1.35  |Q         | V        |          |          |
13+40       0.7652      1.37  |Q         | V        |          |          |
13+45       0.7747      1.39  |Q         | V        |          |          |
13+50       0.7844      1.40  |Q         | V        |          |          |
13+55       0.7942      1.42  |Q         | V        |          |          |
14+ 0       0.8041      1.44  |Q         | V        |          |          |
14+ 5       0.8141      1.46  |Q         |  V       |          |          |
14+10       0.8243      1.48  |Q         |  V       |          |          |
14+15       0.8347      1.50  |Q         |  V       |          |          |
14+20       0.8452      1.52  |Q         |  V       |          |          |
14+25       0.8558      1.55  |Q         |  V       |          |          |
14+30       0.8667      1.58  |Q         |  V       |          |          |
14+35       0.8777      1.60  |Q         |   V      |          |          |
14+40       0.8889      1.63  |Q         |   V      |          |          |
14+45       0.9004      1.66  |Q         |   V      |          |          |
14+50       0.9121      1.70  |Q         |   V      |          |          |
14+55       0.9240      1.73  |Q         |   V      |          |          |
15+ 0       0.9362      1.77  |Q         |    V     |          |          |
15+ 5       0.9487      1.81  |Q         |    V     |          |          |
15+10       0.9615      1.86  |Q         |    V     |          |          |
15+15       0.9747      1.91  |Q         |    V     |          |          |
15+20       0.9883      1.97  |Q         |    V     |          |          |
15+25       1.0021      2.00  | Q       |     V    |          |          |
15+30       1.0156      1.96  |Q        |     V    |          |          |
15+35       1.0278      1.76  |Q        |     V    |          |          |
15+40       1.0383      1.53  |Q        |     V    |          |          |
15+45       1.0487      1.52  |Q        |     V    |          |          |
15+50       1.0597      1.58  |Q        |      V   |          |          |
15+55       1.0717      1.74  |Q        |      V   |          |          |
```

```
16+ 0       1.0859      2.06  | Q        |      V  |          |          |
16+ 5       1.1231      5.40  |    Q     |       V |          |          |
16+10       1.2132     13.09  |          |  Q     V|          |          |
16+15       1.4090     28.43  |          |          | V     Q  |          |
16+20       1.6296     32.04  |          |          |     V    | Q        |
16+25       1.7285     14.36  |          |   Q      |      V   |          |
16+30       1.7966      9.89  |          Q|         |       V  |          |
16+35       1.8494      7.65  |       Q  |         |        V |          |
16+40       1.8930      6.33  |     Q    |         |          V          |
16+45       1.9288      5.20  |    Q     |         |          |V         |
16+50       1.9582      4.26  |   Q      |         |          |V         |
16+55       1.9822      3.50  |  Q       |         |          |V         |
17+ 0       2.0014      2.79  | Q        |         |          | V        |
17+ 5       2.0168      2.23  | Q        |         |          | V        |
17+10       2.0312      2.09  | Q        |         |          | V        |
17+15       2.0446      1.95  |Q         |         |          | V        |
17+20       2.0572      1.83  |Q         |         |          |  V       |
17+25       2.0699      1.83  |Q         |         |          |  V       |
17+30       2.0816      1.70  |Q         |         |          |  V       |
17+35       2.0925      1.58  |Q         |         |          |  V       |
17+40       2.1028      1.50  |Q         |         |          |  V       |
17+45       2.1123      1.37  |Q         |         |          |   V      |
17+50       2.1215      1.34  |Q         |         |          |   V      |
17+55       2.1306      1.32  |Q         |         |          |   V      |
18+ 0       2.1395      1.29  |Q         |         |          |   V      |
18+ 5       2.1481      1.26  |Q         |         |          |   V      |
18+10       2.1565      1.21  |Q         |         |          |   V      |
18+15       2.1643      1.13  |Q         |         |          |   V      |
18+20       2.1715      1.05  |Q         |         |          |   V      |
18+25       2.1784      1.00  |Q         |         |          |    V     |
18+30       2.1851      0.97  Q          |         |          |    V     |
18+35       2.1915      0.93  Q          |         |          |    V     |
18+40       2.1978      0.91  Q          |         |          |    V     |
18+45       2.2039      0.89  Q          |         |          |    V     |
18+50       2.2098      0.87  Q          |         |          |    V     |
18+55       2.2157      0.85  Q          |         |          |    V     |
19+ 0       2.2214      0.83  Q          |         |          |    V     |
19+ 5       2.2270      0.82  Q          |         |          |    V     |
19+10       2.2326      0.80  Q          |         |          |    V     |
19+15       2.2380      0.79  Q          |         |          |     V    |
19+20       2.2434      0.78  Q          |         |          |     V    |
19+25       2.2487      0.77  Q          |         |          |     V    |
19+30       2.2539      0.76  Q          |         |          |     V    |
19+35       2.2591      0.75  Q          |         |          |     V    |
19+40       2.2641      0.74  Q          |         |          |     V    |
19+45       2.2692      0.73  Q          |         |          |     V    |
19+50       2.2741      0.72  Q          |         |          |     V    |
19+55       2.2790      0.71  Q          |         |          |     V    |
20+ 0       2.2839      0.70  Q          |         |          |     V    |
20+ 5       2.2886      0.69  Q          |         |          |     V    |
20+10       2.2934      0.69  Q          |         |          |     V    |
20+15       2.2980      0.68  Q          |         |          |     V    |
20+20       2.3027      0.67  Q          |         |          |      V   |
20+25       2.3073      0.67  Q          |         |          |      V   |
20+30       2.3118      0.66  Q          |         |          |      V   |
20+35       2.3163      0.65  Q          |         |          |      V   |
20+40       2.3207      0.65  Q          |         |          |      V   |
20+45       2.3251      0.64  Q          |         |          |      V   |
20+50       2.3295      0.63  Q          |         |          |      V   |
20+55       2.3338      0.63  Q          |         |          |      V   |
21+ 0       2.3381      0.62  Q          |         |          |      V   |
21+ 5       2.3423      0.62  Q          |         |          |      V   |
21+10       2.3465      0.61  Q          |         |          |      V   |
21+15       2.3507      0.61  Q          |         |          |      V   |
21+20       2.3548      0.60  Q          |         |          |      V   |
21+25       2.3589      0.60  Q          |         |          |      V   |
21+30       2.3630      0.59  Q          |         |          |       V  |
21+35       2.3670      0.59  Q          |         |          |       V  |
21+40       2.3710      0.58  Q          |         |          |       V  |
21+45       2.3750      0.58  Q          |         |          |       V  |
21+50       2.3790      0.57  Q          |         |          |       V  |
```

```
  21+55       2.3829      0.57  Q          |          |          |       V |
  22+ 0       2.3867      0.56  Q          |          |          |       V |
  22+ 5       2.3906      0.56  Q          |          |          |       V |
  22+10       2.3944      0.56  Q          |          |          |       V |
  22+15       2.3982      0.55  Q          |          |          |       V |
  22+20       2.4020      0.55  Q          |          |          |       V |
  22+25       2.4057      0.54  Q          |          |          |       V |
  22+30       2.4094      0.54  Q          |          |          |       V |
  22+35       2.4131      0.54  Q          |          |          |       V |
  22+40       2.4168      0.53  Q          |          |          |       V |
  22+45       2.4204      0.53  Q          |          |          |       V |
  22+50       2.4241      0.53  Q          |          |          |        V|
  22+55       2.4277      0.52  Q          |          |          |        V|
  23+ 0       2.4312      0.52  Q          |          |          |        V|
  23+ 5       2.4348      0.52  Q          |          |          |        V|
  23+10       2.4383      0.51  Q          |          |          |        V|
  23+15       2.4418      0.51  Q          |          |          |        V|
  23+20       2.4453      0.51  Q          |          |          |        V|
  23+25       2.4488      0.50  Q          |          |          |        V|
  23+30       2.4522      0.50  Q          |          |          |        V|
  23+35       2.4557      0.50  Q          |          |          |        V|
  23+40       2.4591      0.49  Q          |          |          |        V|
  23+45       2.4625      0.49  Q          |          |          |        V|
  23+50       2.4658      0.49  Q          |          |          |        V|
  23+55       2.4692      0.49  Q          |          |          |        V|
  24+ 0       2.4725      0.48  Q          |          |          |        V|
  24+ 5       2.4757      0.47  Q          |          |          |        V|
  24+10       2.4786      0.42  Q          |          |          |        V|
  24+15       2.4808      0.31  Q          |          |          |        V|
  24+20       2.4820      0.18  Q          |          |          |        V|
  24+25       2.4828      0.12  Q          |          |          |        V|
  24+30       2.4834      0.09  Q          |          |          |        V|
  24+35       2.4839      0.06  Q          |          |          |        V|
  24+40       2.4842      0.05  Q          |          |          |        V|
  24+45       2.4844      0.03  Q          |          |          |        V|
  24+50       2.4846      0.02  Q          |          |          |        V|
  24+55       2.4847      0.01  Q          |          |          |        V|
  25+ 0       2.4847      0.01  Q          |          |          |        V|
  25+ 5       2.4848      0.01  Q          |          |          |        V|
  25+10       2.4848      0.01  Q          |          |          |        V|
  25+15       2.4848      0.00  Q          |          |          |        V|
  25+20       2.4849      0.00  Q          |          |          |        V|
  25+25       2.4849      0.00  Q          |          |          |        V|
  25+30       2.4849      0.00  Q          |          |          |        V|
  25+35       2.4849      0.00  Q          |          |          |         V
-------------------------------------------------------------------------
```

Area ‘E’ – 5 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/17/24

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------------------------------------------------------------------------------

San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'E'
5 YEAR 24 HOUR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            36.66            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 74.9      56.9         36.66      1.000     0.722    1.000    0.722

Area-averaged adjusted loss rate Fm (In/Hr) =  0.722

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
36.66	1.000	74.9	56.9	7.58	0.271

Area-averaged catchment yield fraction, Y = 0.271
Area-averaged low loss fraction, Yb = 0.729
User entry of time of concentration = 0.293 (hours)
++
Watershed area = 36.66(Ac.)
Catchment Lag time = 0.234 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.5518
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.722(In/Hr)
Average low loss rate fraction (Yb) = 0.729 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 36.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.402(In)
30-minute factor = 0.998 Adjusted rainfall = 0.689(In)
1-hour factor = 0.998 Adjusted rainfall = 0.848(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.585(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 443.36 (CFS))	
1	2.675	11.860
2	12.024	41.451
3	35.644	104.718
4	63.026	121.402
5	74.204	49.558
6	81.479	32.252
7	86.684	23.079
8	90.577	17.258
9	93.485	12.896
10	95.602	9.386
11	97.088	6.587
12	97.988	3.990
13	98.429	1.953
14	98.799	1.644
15	99.093	1.300
16	99.316	0.991
17	99.592	1.221
18	99.789	0.873
19	99.913	0.549
20	100.000	0.388

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4024	0.4024
2	0.4954	0.0930
3	0.5595	0.0641
4	0.6099	0.0504
5	0.6521	0.0422
6	0.6888	0.0367

7	0.7214	0.0326
8	0.7509	0.0295
9	0.7779	0.0270
10	0.8029	0.0250
11	0.8262	0.0233
12	0.8480	0.0218
13	0.8914	0.0433
14	0.9334	0.0421
15	0.9744	0.0410
16	1.0144	0.0399
17	1.0534	0.0390
18	1.0915	0.0382
19	1.1289	0.0374
20	1.1655	0.0366
21	1.2015	0.0359
22	1.2368	0.0353
23	1.2715	0.0347
24	1.3056	0.0341
25	1.3393	0.0336
26	1.3724	0.0331
27	1.4050	0.0326
28	1.4372	0.0322
29	1.4689	0.0317
30	1.5002	0.0313
31	1.5312	0.0309
32	1.5617	0.0306
33	1.5920	0.0302
34	1.6218	0.0299
35	1.6513	0.0295
36	1.6806	0.0292
37	1.7094	0.0289
38	1.7380	0.0286
39	1.7663	0.0283
40	1.7943	0.0280
41	1.8220	0.0277
42	1.8495	0.0275
43	1.8767	0.0272
44	1.9037	0.0270
45	1.9305	0.0268
46	1.9571	0.0265
47	1.9834	0.0263
48	2.0095	0.0261
49	2.0354	0.0259
50	2.0611	0.0257
51	2.0866	0.0255
52	2.1120	0.0253
53	2.1371	0.0251
54	2.1621	0.0250
55	2.1869	0.0248
56	2.2115	0.0246
57	2.2360	0.0245
58	2.2602	0.0243
59	2.2844	0.0241
60	2.3084	0.0240
61	2.3322	0.0238
62	2.3559	0.0237
63	2.3794	0.0235
64	2.4028	0.0234
65	2.4261	0.0233
66	2.4492	0.0231
67	2.4722	0.0230
68	2.4951	0.0229
69	2.5178	0.0227
70	2.5404	0.0226
71	2.5629	0.0225
72	2.5853	0.0224
73	2.6065	0.0212
74	2.6275	0.0211
75	2.6485	0.0210
76	2.6693	0.0208
77	2.6901	0.0207

78	2.7107	0.0206
79	2.7312	0.0205
80	2.7516	0.0204
81	2.7719	0.0203
82	2.7922	0.0202
83	2.8123	0.0201
84	2.8323	0.0200
85	2.8522	0.0199
86	2.8720	0.0198
87	2.8917	0.0197
88	2.9113	0.0196
89	2.9309	0.0195
90	2.9503	0.0194
91	2.9697	0.0194
92	2.9890	0.0193
93	3.0082	0.0192
94	3.0273	0.0191
95	3.0463	0.0190
96	3.0652	0.0189
97	3.0841	0.0189
98	3.1029	0.0188
99	3.1216	0.0187
100	3.1402	0.0186
101	3.1588	0.0186
102	3.1772	0.0185
103	3.1956	0.0184
104	3.2140	0.0183
105	3.2322	0.0183
106	3.2504	0.0182
107	3.2685	0.0181
108	3.2866	0.0180
109	3.3046	0.0180
110	3.3225	0.0179
111	3.3403	0.0178
112	3.3581	0.0178
113	3.3758	0.0177
114	3.3935	0.0177
115	3.4111	0.0176
116	3.4286	0.0175
117	3.4460	0.0175
118	3.4635	0.0174
119	3.4808	0.0173
120	3.4981	0.0173
121	3.5153	0.0172
122	3.5325	0.0172
123	3.5496	0.0171
124	3.5666	0.0171
125	3.5836	0.0170
126	3.6006	0.0169
127	3.6175	0.0169
128	3.6343	0.0168
129	3.6511	0.0168
130	3.6678	0.0167
131	3.6845	0.0167
132	3.7011	0.0166
133	3.7177	0.0166
134	3.7342	0.0165
135	3.7507	0.0165
136	3.7671	0.0164
137	3.7835	0.0164
138	3.7998	0.0163
139	3.8161	0.0163
140	3.8323	0.0162
141	3.8485	0.0162
142	3.8646	0.0161
143	3.8807	0.0161
144	3.8967	0.0160
145	3.9127	0.0160
146	3.9287	0.0160
147	3.9446	0.0159
148	3.9605	0.0159

149	3.9763	0.0158
150	3.9921	0.0158
151	4.0078	0.0157
152	4.0235	0.0157
153	4.0391	0.0156
154	4.0547	0.0156
155	4.0703	0.0156
156	4.0858	0.0155
157	4.1013	0.0155
158	4.1168	0.0154
159	4.1322	0.0154
160	4.1475	0.0154
161	4.1628	0.0153
162	4.1781	0.0153
163	4.1934	0.0152
164	4.2086	0.0152
165	4.2238	0.0152
166	4.2389	0.0151
167	4.2540	0.0151
168	4.2691	0.0151
169	4.2841	0.0150
170	4.2991	0.0150
171	4.3140	0.0150
172	4.3289	0.0149
173	4.3438	0.0149
174	4.3587	0.0148
175	4.3735	0.0148
176	4.3882	0.0148
177	4.4030	0.0147
178	4.4177	0.0147
179	4.4324	0.0147
180	4.4470	0.0146
181	4.4616	0.0146
182	4.4762	0.0146
183	4.4907	0.0145
184	4.5053	0.0145
185	4.5197	0.0145
186	4.5342	0.0144
187	4.5486	0.0144
188	4.5630	0.0144
189	4.5773	0.0144
190	4.5916	0.0143
191	4.6059	0.0143
192	4.6202	0.0143
193	4.6344	0.0142
194	4.6486	0.0142
195	4.6628	0.0142
196	4.6769	0.0141
197	4.6910	0.0141
198	4.7051	0.0141
199	4.7192	0.0141
200	4.7332	0.0140
201	4.7472	0.0140
202	4.7612	0.0140
203	4.7751	0.0139
204	4.7890	0.0139
205	4.8029	0.0139
206	4.8167	0.0139
207	4.8306	0.0138
208	4.8444	0.0138
209	4.8582	0.0138
210	4.8719	0.0137
211	4.8856	0.0137
212	4.8993	0.0137
213	4.9130	0.0137
214	4.9266	0.0136
215	4.9402	0.0136
216	4.9538	0.0136
217	4.9674	0.0136
218	4.9809	0.0135
219	4.9944	0.0135

220	5.0079	0.0135
221	5.0214	0.0135
222	5.0348	0.0134
223	5.0482	0.0134
224	5.0616	0.0134
225	5.0750	0.0134
226	5.0883	0.0133
227	5.1016	0.0133
228	5.1149	0.0133
229	5.1282	0.0133
230	5.1414	0.0132
231	5.1547	0.0132
232	5.1679	0.0132
233	5.1810	0.0132
234	5.1942	0.0132
235	5.2073	0.0131
236	5.2204	0.0131
237	5.2335	0.0131
238	5.2466	0.0131
239	5.2596	0.0130
240	5.2726	0.0130
241	5.2856	0.0130
242	5.2986	0.0130
243	5.3115	0.0130
244	5.3245	0.0129
245	5.3374	0.0129
246	5.3503	0.0129
247	5.3631	0.0129
248	5.3760	0.0128
249	5.3888	0.0128
250	5.4016	0.0128
251	5.4144	0.0128
252	5.4271	0.0128
253	5.4399	0.0127
254	5.4526	0.0127
255	5.4653	0.0127
256	5.4780	0.0127
257	5.4906	0.0127
258	5.5033	0.0126
259	5.5159	0.0126
260	5.5285	0.0126
261	5.5410	0.0126
262	5.5536	0.0126
263	5.5661	0.0125
264	5.5787	0.0125
265	5.5912	0.0125
266	5.6036	0.0125
267	5.6161	0.0125
268	5.6285	0.0124
269	5.6410	0.0124
270	5.6534	0.0124
271	5.6658	0.0124
272	5.6781	0.0124
273	5.6905	0.0123
274	5.7028	0.0123
275	5.7151	0.0123
276	5.7274	0.0123
277	5.7397	0.0123
278	5.7519	0.0123
279	5.7642	0.0122
280	5.7764	0.0122
281	5.7886	0.0122
282	5.8008	0.0122
283	5.8129	0.0122
284	5.8251	0.0122
285	5.8372	0.0121
286	5.8493	0.0121
287	5.8614	0.0121
288	5.8735	0.0121

Unit	Unit	Unit	Effective

Period (number)	Rainfall (In)	Soil-Loss (In)	Rainfall (In)
1	0.0121	0.0088	0.0033
2	0.0121	0.0088	0.0033
3	0.0121	0.0088	0.0033
4	0.0122	0.0089	0.0033
5	0.0122	0.0089	0.0033
6	0.0122	0.0089	0.0033
7	0.0122	0.0089	0.0033
8	0.0123	0.0089	0.0033
9	0.0123	0.0090	0.0033
10	0.0123	0.0090	0.0033
11	0.0123	0.0090	0.0033
12	0.0124	0.0090	0.0033
13	0.0124	0.0090	0.0034
14	0.0124	0.0091	0.0034
15	0.0125	0.0091	0.0034
16	0.0125	0.0091	0.0034
17	0.0125	0.0091	0.0034
18	0.0125	0.0091	0.0034
19	0.0126	0.0092	0.0034
20	0.0126	0.0092	0.0034
21	0.0126	0.0092	0.0034
22	0.0127	0.0092	0.0034
23	0.0127	0.0093	0.0034
24	0.0127	0.0093	0.0034
25	0.0128	0.0093	0.0035
26	0.0128	0.0093	0.0035
27	0.0128	0.0093	0.0035
28	0.0128	0.0094	0.0035
29	0.0129	0.0094	0.0035
30	0.0129	0.0094	0.0035
31	0.0130	0.0094	0.0035
32	0.0130	0.0095	0.0035
33	0.0130	0.0095	0.0035
34	0.0130	0.0095	0.0035
35	0.0131	0.0095	0.0035
36	0.0131	0.0096	0.0035
37	0.0132	0.0096	0.0036
38	0.0132	0.0096	0.0036
39	0.0132	0.0096	0.0036
40	0.0132	0.0097	0.0036
41	0.0133	0.0097	0.0036
42	0.0133	0.0097	0.0036
43	0.0134	0.0097	0.0036
44	0.0134	0.0098	0.0036
45	0.0134	0.0098	0.0036
46	0.0135	0.0098	0.0036
47	0.0135	0.0099	0.0037
48	0.0135	0.0099	0.0037
49	0.0136	0.0099	0.0037
50	0.0136	0.0099	0.0037
51	0.0137	0.0100	0.0037
52	0.0137	0.0100	0.0037
53	0.0137	0.0100	0.0037
54	0.0138	0.0100	0.0037
55	0.0138	0.0101	0.0037
56	0.0139	0.0101	0.0038
57	0.0139	0.0101	0.0038
58	0.0139	0.0102	0.0038
59	0.0140	0.0102	0.0038
60	0.0140	0.0102	0.0038
61	0.0141	0.0103	0.0038
62	0.0141	0.0103	0.0038
63	0.0142	0.0103	0.0038
64	0.0142	0.0104	0.0038
65	0.0143	0.0104	0.0039
66	0.0143	0.0104	0.0039
67	0.0144	0.0105	0.0039
68	0.0144	0.0105	0.0039

69	0.0144	0.0105	0.0039
70	0.0145	0.0106	0.0039
71	0.0145	0.0106	0.0039
72	0.0146	0.0106	0.0039
73	0.0146	0.0107	0.0040
74	0.0147	0.0107	0.0040
75	0.0147	0.0108	0.0040
76	0.0148	0.0108	0.0040
77	0.0148	0.0108	0.0040
78	0.0149	0.0109	0.0040
79	0.0150	0.0109	0.0040
80	0.0150	0.0109	0.0041
81	0.0151	0.0110	0.0041
82	0.0151	0.0110	0.0041
83	0.0152	0.0111	0.0041
84	0.0152	0.0111	0.0041
85	0.0153	0.0111	0.0041
86	0.0153	0.0112	0.0041
87	0.0154	0.0112	0.0042
88	0.0154	0.0113	0.0042
89	0.0155	0.0113	0.0042
90	0.0156	0.0114	0.0042
91	0.0156	0.0114	0.0042
92	0.0157	0.0114	0.0042
93	0.0158	0.0115	0.0043
94	0.0158	0.0115	0.0043
95	0.0159	0.0116	0.0043
96	0.0160	0.0116	0.0043
97	0.0160	0.0117	0.0043
98	0.0161	0.0117	0.0044
99	0.0162	0.0118	0.0044
100	0.0162	0.0118	0.0044
101	0.0163	0.0119	0.0044
102	0.0164	0.0119	0.0044
103	0.0165	0.0120	0.0045
104	0.0165	0.0120	0.0045
105	0.0166	0.0121	0.0045
106	0.0167	0.0122	0.0045
107	0.0168	0.0122	0.0045
108	0.0168	0.0123	0.0046
109	0.0169	0.0124	0.0046
110	0.0170	0.0124	0.0046
111	0.0171	0.0125	0.0046
112	0.0172	0.0125	0.0046
113	0.0173	0.0126	0.0047
114	0.0173	0.0126	0.0047
115	0.0175	0.0127	0.0047
116	0.0175	0.0128	0.0047
117	0.0177	0.0129	0.0048
118	0.0177	0.0129	0.0048
119	0.0178	0.0130	0.0048
120	0.0179	0.0131	0.0049
121	0.0180	0.0132	0.0049
122	0.0181	0.0132	0.0049
123	0.0183	0.0133	0.0049
124	0.0183	0.0134	0.0050
125	0.0185	0.0135	0.0050
126	0.0186	0.0135	0.0050
127	0.0187	0.0136	0.0051
128	0.0188	0.0137	0.0051
129	0.0189	0.0138	0.0051
130	0.0190	0.0139	0.0052
131	0.0192	0.0140	0.0052
132	0.0193	0.0141	0.0052
133	0.0194	0.0142	0.0053
134	0.0195	0.0142	0.0053
135	0.0197	0.0144	0.0053
136	0.0198	0.0144	0.0054
137	0.0200	0.0146	0.0054
138	0.0201	0.0147	0.0054
139	0.0203	0.0148	0.0055

140	0.0204	0.0149	0.0055
141	0.0206	0.0150	0.0056
142	0.0207	0.0151	0.0056
143	0.0210	0.0153	0.0057
144	0.0211	0.0154	0.0057
145	0.0224	0.0163	0.0061
146	0.0225	0.0164	0.0061
147	0.0227	0.0166	0.0062
148	0.0229	0.0167	0.0062
149	0.0231	0.0169	0.0063
150	0.0233	0.0170	0.0063
151	0.0235	0.0172	0.0064
152	0.0237	0.0173	0.0064
153	0.0240	0.0175	0.0065
154	0.0241	0.0176	0.0065
155	0.0245	0.0178	0.0066
156	0.0246	0.0180	0.0067
157	0.0250	0.0182	0.0068
158	0.0251	0.0183	0.0068
159	0.0255	0.0186	0.0069
160	0.0257	0.0187	0.0070
161	0.0261	0.0190	0.0071
162	0.0263	0.0192	0.0071
163	0.0268	0.0195	0.0072
164	0.0270	0.0197	0.0073
165	0.0275	0.0200	0.0074
166	0.0277	0.0202	0.0075
167	0.0283	0.0206	0.0077
168	0.0286	0.0208	0.0077
169	0.0292	0.0213	0.0079
170	0.0295	0.0215	0.0080
171	0.0302	0.0220	0.0082
172	0.0306	0.0223	0.0083
173	0.0313	0.0228	0.0085
174	0.0317	0.0231	0.0086
175	0.0326	0.0238	0.0088
176	0.0331	0.0241	0.0090
177	0.0341	0.0249	0.0092
178	0.0347	0.0253	0.0094
179	0.0359	0.0262	0.0097
180	0.0366	0.0267	0.0099
181	0.0382	0.0278	0.0103
182	0.0390	0.0285	0.0106
183	0.0410	0.0299	0.0111
184	0.0421	0.0307	0.0114
185	0.0218	0.0159	0.0059
186	0.0233	0.0170	0.0063
187	0.0270	0.0197	0.0073
188	0.0295	0.0215	0.0080
189	0.0367	0.0267	0.0099
190	0.0422	0.0308	0.0114
191	0.0641	0.0467	0.0174
192	0.0930	0.0602	0.0328
193	0.4024	0.0602	0.3422
194	0.0504	0.0368	0.0137
195	0.0326	0.0238	0.0088
196	0.0250	0.0182	0.0068
197	0.0433	0.0316	0.0117
198	0.0399	0.0291	0.0108
199	0.0374	0.0272	0.0101
200	0.0353	0.0257	0.0096
201	0.0336	0.0245	0.0091
202	0.0322	0.0235	0.0087
203	0.0309	0.0226	0.0084
204	0.0299	0.0218	0.0081
205	0.0289	0.0210	0.0078
206	0.0280	0.0204	0.0076
207	0.0272	0.0199	0.0074
208	0.0265	0.0194	0.0072
209	0.0259	0.0189	0.0070
210	0.0253	0.0185	0.0069

211	0.0248	0.0181	0.0067
212	0.0243	0.0177	0.0066
213	0.0238	0.0174	0.0065
214	0.0234	0.0171	0.0063
215	0.0230	0.0168	0.0062
216	0.0226	0.0165	0.0061
217	0.0212	0.0155	0.0057
218	0.0208	0.0152	0.0056
219	0.0205	0.0150	0.0056
220	0.0202	0.0147	0.0055
221	0.0199	0.0145	0.0054
222	0.0196	0.0143	0.0053
223	0.0194	0.0141	0.0052
224	0.0191	0.0139	0.0052
225	0.0189	0.0138	0.0051
226	0.0186	0.0136	0.0050
227	0.0184	0.0134	0.0050
228	0.0182	0.0133	0.0049
229	0.0180	0.0131	0.0049
230	0.0178	0.0130	0.0048
231	0.0176	0.0128	0.0048
232	0.0174	0.0127	0.0047
233	0.0172	0.0126	0.0047
234	0.0171	0.0124	0.0046
235	0.0169	0.0123	0.0046
236	0.0167	0.0122	0.0045
237	0.0166	0.0121	0.0045
238	0.0164	0.0120	0.0044
239	0.0163	0.0119	0.0044
240	0.0161	0.0118	0.0044
241	0.0160	0.0117	0.0043
242	0.0159	0.0116	0.0043
243	0.0157	0.0115	0.0043
244	0.0156	0.0114	0.0042
245	0.0155	0.0113	0.0042
246	0.0154	0.0112	0.0042
247	0.0152	0.0111	0.0041
248	0.0151	0.0110	0.0041
249	0.0150	0.0110	0.0041
250	0.0149	0.0109	0.0040
251	0.0148	0.0108	0.0040
252	0.0147	0.0107	0.0040
253	0.0146	0.0107	0.0040
254	0.0145	0.0106	0.0039
255	0.0144	0.0105	0.0039
256	0.0143	0.0104	0.0039
257	0.0142	0.0104	0.0039
258	0.0141	0.0103	0.0038
259	0.0141	0.0102	0.0038
260	0.0140	0.0102	0.0038
261	0.0139	0.0101	0.0038
262	0.0138	0.0101	0.0037
263	0.0137	0.0100	0.0037
264	0.0136	0.0099	0.0037
265	0.0136	0.0099	0.0037
266	0.0135	0.0098	0.0037
267	0.0134	0.0098	0.0036
268	0.0133	0.0097	0.0036
269	0.0133	0.0097	0.0036
270	0.0132	0.0096	0.0036
271	0.0131	0.0096	0.0036
272	0.0131	0.0095	0.0035
273	0.0130	0.0095	0.0035
274	0.0129	0.0094	0.0035
275	0.0129	0.0094	0.0035
276	0.0128	0.0093	0.0035
277	0.0127	0.0093	0.0034
278	0.0127	0.0092	0.0034
279	0.0126	0.0092	0.0034
280	0.0126	0.0092	0.0034
281	0.0125	0.0091	0.0034

```
      282              0.0124           0.0091              0.0034
      283              0.0124           0.0090              0.0034
      284              0.0123           0.0090              0.0033
      285              0.0123           0.0090              0.0033
      286              0.0122           0.0089              0.0033
      287              0.0122           0.0089              0.0033
      288              0.0121           0.0088              0.0033
      ----------------------------------------------------------------------
      ----------------------------------------------------------------------
      Total soil rain loss =      4.04(In)
      Total effective rainfall =      1.83(In)
      Peak flow rate in flood hydrograph =     46.37(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       12.5      25.0      37.5      50.0
----------------------------------------------------------------------------
  0+ 5       0.0003      0.04  Q         |         |         |         |
  0+10       0.0015      0.17  Q         |         |         |         |
  0+15       0.0050      0.52  Q         |         |         |         |
  0+20       0.0113      0.92  Q         |         |         |         |
  0+25       0.0188      1.08  Q         |         |         |         |
  0+30       0.0269      1.19  Q         |         |         |         |
  0+35       0.0357      1.27  VQ        |         |         |         |
  0+40       0.0448      1.32  VQ        |         |         |         |
  0+45       0.0542      1.37  VQ        |         |         |         |
  0+50       0.0639      1.40  VQ        |         |         |         |
  0+55       0.0737      1.43  VQ        |         |         |         |
  1+ 0       0.0837      1.44  VQ        |         |         |         |
  1+ 5       0.0937      1.45  VQ        |         |         |         |
  1+10       0.1037      1.46  VQ        |         |         |         |
  1+15       0.1139      1.47  VQ        |         |         |         |
  1+20       0.1240      1.48  VQ        |         |         |         |
  1+25       0.1342      1.48  VQ        |         |         |         |
  1+30       0.1445      1.49  |Q        |         |         |         |
  1+35       0.1548      1.50  |Q        |         |         |         |
  1+40       0.1651      1.50  |Q        |         |         |         |
  1+45       0.1755      1.50  |Q        |         |         |         |
  1+50       0.1859      1.51  |Q        |         |         |         |
  1+55       0.1963      1.51  |Q        |         |         |         |
  2+ 0       0.2067      1.51  |Q        |         |         |         |
  2+ 5       0.2171      1.52  |Q        |         |         |         |
  2+10       0.2276      1.52  |Q        |         |         |         |
  2+15       0.2381      1.52  |Q        |         |         |         |
  2+20       0.2486      1.53  |Q        |         |         |         |
  2+25       0.2592      1.53  |Q        |         |         |         |
  2+30       0.2698      1.54  |Q        |         |         |         |
  2+35       0.2804      1.54  |QV       |         |         |         |
  2+40       0.2910      1.54  |QV       |         |         |         |
  2+45       0.3017      1.55  |QV       |         |         |         |
  2+50       0.3124      1.55  |QV       |         |         |         |
  2+55       0.3231      1.56  |QV       |         |         |         |
  3+ 0       0.3338      1.56  |QV       |         |         |         |
  3+ 5       0.3446      1.56  |QV       |         |         |         |
  3+10       0.3554      1.57  |QV       |         |         |         |
  3+15       0.3662      1.57  |QV       |         |         |         |
  3+20       0.3770      1.58  |QV       |         |         |         |
  3+25       0.3879      1.58  |QV       |         |         |         |
  3+30       0.3988      1.58  |QV       |         |         |         |
  3+35       0.4098      1.59  |QV       |         |         |         |
  3+40       0.4207      1.59  |Q V      |         |         |         |
  3+45       0.4317      1.60  |Q V      |         |         |         |
  3+50       0.4427      1.60  |Q V      |         |         |         |
  3+55       0.4538      1.60  |Q V      |         |         |         |
  4+ 0       0.4649      1.61  |Q V      |         |         |         |
  4+ 5       0.4760      1.61  |Q V      |         |         |         |
```

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 4+10      0.4871      1.62  |Q V      |         |         |         |
 4+15      0.4983      1.62  |Q V      |         |         |         |
 4+20      0.5095      1.63  |Q V      |         |         |         |
 4+25      0.5208      1.63  |Q V      |         |         |         |
 4+30      0.5320      1.64  |Q V      |         |         |         |
 4+35      0.5433      1.64  |Q V      |         |         |         |
 4+40      0.5547      1.65  |Q V      |         |         |         |
 4+45      0.5660      1.65  |Q  V     |         |         |         |
 4+50      0.5774      1.66  |Q  V     |         |         |         |
 4+55      0.5889      1.66  |Q  V     |         |         |         |
 5+ 0      0.6003      1.67  |Q  V     |         |         |         |
 5+ 5      0.6119      1.67  |Q  V     |         |         |         |
 5+10      0.6234      1.68  |Q  V     |         |         |         |
 5+15      0.6350      1.68  |Q  V     |         |         |         |
 5+20      0.6466      1.69  |Q  V     |         |         |         |
 5+25      0.6582      1.69  |Q  V     |         |         |         |
 5+30      0.6699      1.70  |Q  V     |         |         |         |
 5+35      0.6816      1.70  |Q  V     |         |         |         |
 5+40      0.6934      1.71  |Q  V     |         |         |         |
 5+45      0.7052      1.71  |Q   V    |         |         |         |
 5+50      0.7170      1.72  |Q   V    |         |         |         |
 5+55      0.7289      1.72  |Q   V    |         |         |         |
 6+ 0      0.7408      1.73  |Q   V    |         |         |         |
 6+ 5      0.7528      1.74  |Q   V    |         |         |         |
 6+10      0.7647      1.74  |Q   V    |         |         |         |
 6+15      0.7768      1.75  |Q   V    |         |         |         |
 6+20      0.7888      1.75  |Q   V    |         |         |         |
 6+25      0.8010      1.76  |Q   V    |         |         |         |
 6+30      0.8131      1.76  |Q   V    |         |         |         |
 6+35      0.8253      1.77  |Q   V    |         |         |         |
 6+40      0.8375      1.78  |Q   V    |         |         |         |
 6+45      0.8498      1.78  |Q    V   |         |         |         |
 6+50      0.8621      1.79  |Q    V   |         |         |         |
 6+55      0.8745      1.80  |Q    V   |         |         |         |
 7+ 0      0.8869      1.80  |Q    V   |         |         |         |
 7+ 5      0.8994      1.81  |Q    V   |         |         |         |
 7+10      0.9119      1.82  |Q    V   |         |         |         |
 7+15      0.9244      1.82  |Q    V   |         |         |         |
 7+20      0.9370      1.83  |Q    V   |         |         |         |
 7+25      0.9497      1.84  |Q    V   |         |         |         |
 7+30      0.9624      1.84  |Q    V   |         |         |         |
 7+35      0.9751      1.85  |Q    V   |         |         |         |
 7+40      0.9879      1.86  |Q     V  |         |         |         |
 7+45      1.0008      1.86  |Q     V  |         |         |         |
 7+50      1.0136      1.87  |Q     V  |         |         |         |
 7+55      1.0266      1.88  |Q     V  |         |         |         |
 8+ 0      1.0396      1.89  |Q     V  |         |         |         |
 8+ 5      1.0526      1.89  |Q     V  |         |         |         |
 8+10      1.0657      1.90  |Q     V  |         |         |         |
 8+15      1.0789      1.91  |Q     V  |         |         |         |
 8+20      1.0921      1.92  |Q     V  |         |         |         |
 8+25      1.1054      1.93  |Q     V  |         |         |         |
 8+30      1.1187      1.94  |Q      V |         |         |         |
 8+35      1.1321      1.94  |Q      V |         |         |         |
 8+40      1.1456      1.95  |Q      V |         |         |         |
 8+45      1.1591      1.96  |Q      V |         |         |         |
 8+50      1.1726      1.97  |Q      V |         |         |         |
 8+55      1.1863      1.98  |Q      V |         |         |         |
 9+ 0      1.1999      1.99  |Q      V |         |         |         |
 9+ 5      1.2137      2.00  |Q      V |         |         |         |
 9+10      1.2275      2.01  |Q      V |         |         |         |
 9+15      1.2414      2.02  |Q      V |         |         |         |
 9+20      1.2554      2.03  |Q      V |         |         |         |
 9+25      1.2694      2.04  |Q       V|         |         |         |
 9+30      1.2835      2.05  |Q       V|         |         |         |
 9+35      1.2976      2.06  |Q       V|         |         |         |
 9+40      1.3119      2.07  |Q       V|         |         |         |
 9+45      1.3262      2.08  |Q       V|         |         |         |
 9+50      1.3405      2.09  |Q       V|         |         |         |
 9+55      1.3550      2.10  |Q       V|         |         |         |
10+ 0      1.3695      2.11  |Q       V|         |         |         |
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10+ 5       1.3841      2.12  |Q       V|         |         |         |
10+10       1.3988      2.13  |Q        V         |         |         |
10+15       1.4136      2.14  |Q        V         |         |         |
10+20       1.4284      2.16  |Q        V         |         |         |
10+25       1.4434      2.17  |Q        V         |         |         |
10+30       1.4584      2.18  |Q        V         |         |         |
10+35       1.4735      2.19  |Q        V         |         |         |
10+40       1.4887      2.21  |Q        V         |         |         |
10+45       1.5040      2.22  |Q        V         |         |         |
10+50       1.5194      2.23  |Q        V         |         |         |
10+55       1.5349      2.25  |Q        V         |         |         |
11+ 0       1.5504      2.26  |Q        |V         |         |         |
11+ 5       1.5661      2.28  |Q        |V         |         |         |
11+10       1.5819      2.29  |Q        |V         |         |         |
11+15       1.5978      2.31  |Q        |V         |         |         |
11+20       1.6138      2.32  |Q        |V         |         |         |
11+25       1.6299      2.34  |Q        |V         |         |         |
11+30       1.6461      2.35  |Q        |V         |         |         |
11+35       1.6624      2.37  |Q        |V         |         |         |
11+40       1.6788      2.39  |Q        | V        |         |         |
11+45       1.6954      2.41  |Q        | V        |         |         |
11+50       1.7121      2.42  |Q        | V        |         |         |
11+55       1.7289      2.44  |Q        | V        |         |         |
12+ 0       1.7459      2.46  |Q        | V        |         |         |
12+ 5       1.7630      2.48  |Q        | V        |         |         |
12+10       1.7803      2.52  | Q       | V        |         |         |
12+15       1.7980      2.57  | Q       | V        |         |         |
12+20       1.8160      2.62  | Q       | V        |         |         |
12+25       1.8343      2.66  | Q       |  V       |         |         |
12+30       1.8528      2.69  | Q       |  V       |         |         |
12+35       1.8715      2.72  | Q       |  V       |         |         |
12+40       1.8904      2.75  | Q       |  V       |         |         |
12+45       1.9095      2.77  | Q       |  V       |         |         |
12+50       1.9288      2.80  | Q       |  V       |         |         |
12+55       1.9483      2.83  | Q       |  V       |         |         |
13+ 0       1.9679      2.86  | Q       |   V      |         |         |
13+ 5       1.9878      2.88  | Q       |   V      |         |         |
13+10       2.0078      2.91  | Q       |   V      |         |         |
13+15       2.0281      2.94  | Q       |   V      |         |         |
13+20       2.0486      2.97  | Q       |   V      |         |         |
13+25       2.0693      3.00  | Q       |   V      |         |         |
13+30       2.0902      3.04  | Q       |   V      |         |         |
13+35       2.1113      3.07  | Q       |    V     |         |         |
13+40       2.1327      3.11  | Q       |    V     |         |         |
13+45       2.1544      3.14  | Q       |    V     |         |         |
13+50       2.1763      3.18  | Q       |    V     |         |         |
13+55       2.1985      3.22  | Q       |    V     |         |         |
14+ 0       2.2210      3.27  | Q       |    V     |         |         |
14+ 5       2.2438      3.31  | Q       |     V    |         |         |
14+10       2.2669      3.36  | Q       |     V    |         |         |
14+15       2.2904      3.41  | Q       |     V    |         |         |
14+20       2.3143      3.47  | Q       |     V    |         |         |
14+25       2.3385      3.52  | Q       |     V    |         |         |
14+30       2.3632      3.58  | Q       |     V    |         |         |
14+35       2.3883      3.64  | Q       |      V   |         |         |
14+40       2.4139      3.71  | Q       |      V   |         |         |
14+45       2.4399      3.78  |  Q      |      V   |         |         |
14+50       2.4665      3.86  |  Q      |      V   |         |         |
14+55       2.4937      3.94  |  Q      |      V   |         |         |
15+ 0       2.5215      4.04  |  Q      |       V  |         |         |
15+ 5       2.5500      4.13  |  Q      |       V  |         |         |
15+10       2.5792      4.24  |  Q      |       V  |         |         |
15+15       2.6092      4.36  |  Q      |       V  |         |         |
15+20       2.6402      4.50  |  Q      |       V  |         |         |
15+25       2.6717      4.57  |  Q      |        V|         |         |
15+30       2.7026      4.49  |  Q      |        V|         |         |
15+35       2.7304      4.04  |  Q      |        V|         |         |
15+40       2.7547      3.52  | Q       |        V|         |         |
15+45       2.7787      3.49  | Q       |        V|         |         |
15+50       2.8038      3.65  | Q       |         V|         |         |
15+55       2.8314      4.02  |  Q      |         V|         |         |
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16+ 0       2.8648      4.84  |  Q       |          V          |          |
16+ 5       2.9339     10.04  |        Q |          V          |          |
16+10       3.0815     21.43  |          |       Q  | V        |          |
16+15       3.3736     42.42  |          |          |   V      |  Q       |
16+20       3.6930     46.37  |          |          |     V    |       Q  |
16+25       3.8443     21.98  |          |       Q  |       V  |          |
16+30       3.9515     15.57  |          | Q        |        V |          |
16+35       4.0374     12.46  |         Q|          |        V |          |
16+40       4.1111     10.71  |        Q |          |         V|          |
16+45       4.1736      9.07  |       Q  |          |         V|          |
16+50       4.2266      7.69  |     Q    |          |          V          |
16+55       4.2716      6.53  |    Q     |          |          V          |
17+ 0       4.3093      5.48  |   Q      |          |          V          |
17+ 5       4.3413      4.65  |  Q       |          |          |V         |
17+10       4.3717      4.41  |  Q       |          |          |V         |
17+15       4.4004      4.17  |  Q       |          |          |V         |
17+20       4.4276      3.95  |  Q       |          |          |V         |
17+25       4.4544      3.90  |  Q       |          |          |V         |
17+30       4.4798      3.68  | Q        |          |          | V        |
17+35       4.5037      3.47  | Q        |          |          | V        |
17+40       4.5266      3.32  | Q        |          |          | V        |
17+45       4.5481      3.12  | Q        |          |          | V        |
17+50       4.5691      3.05  | Q        |          |          | V        |
17+55       4.5896      2.98  | Q        |          |          | V        |
18+ 0       4.6098      2.92  | Q        |          |          | V        |
18+ 5       4.6295      2.86  | Q        |          |          |  V       |
18+10       4.6487      2.80  | Q        |          |          |  V       |
18+15       4.6674      2.72  | Q        |          |          |  V       |
18+20       4.6856      2.64  | Q        |          |          |  V       |
18+25       4.7033      2.58  | Q        |          |          |  V       |
18+30       4.7207      2.53  | Q        |          |          |  V       |
18+35       4.7378      2.48  |Q         |          |          |  V       |
18+40       4.7546      2.44  |Q         |          |          |   V      |
18+45       4.7711      2.40  |Q         |          |          |   V      |
18+50       4.7874      2.36  |Q         |          |          |   V      |
18+55       4.8034      2.33  |Q         |          |          |   V      |
19+ 0       4.8192      2.29  |Q         |          |          |   V      |
19+ 5       4.8348      2.26  |Q         |          |          |   V      |
19+10       4.8502      2.24  |Q         |          |          |   V      |
19+15       4.8654      2.21  |Q         |          |          |   V      |
19+20       4.8804      2.18  |Q         |          |          |   V      |
19+25       4.8953      2.16  |Q         |          |          |    V     |
19+30       4.9100      2.13  |Q         |          |          |    V     |
19+35       4.9245      2.11  |Q         |          |          |    V     |
19+40       4.9389      2.09  |Q         |          |          |    V     |
19+45       4.9531      2.07  |Q         |          |          |    V     |
19+50       4.9672      2.05  |Q         |          |          |    V     |
19+55       4.9811      2.03  |Q         |          |          |    V     |
20+ 0       4.9949      2.01  |Q         |          |          |    V     |
20+ 5       5.0086      1.99  |Q         |          |          |    V     |
20+10       5.0222      1.97  |Q         |          |          |    V     |
20+15       5.0356      1.95  |Q         |          |          |     V    |
20+20       5.0489      1.93  |Q         |          |          |     V    |
20+25       5.0622      1.92  |Q         |          |          |     V    |
20+30       5.0753      1.90  |Q         |          |          |     V    |
20+35       5.0883      1.89  |Q         |          |          |     V    |
20+40       5.1011      1.87  |Q         |          |          |     V    |
20+45       5.1139      1.86  |Q         |          |          |     V    |
20+50       5.1266      1.84  |Q         |          |          |     V    |
20+55       5.1392      1.83  |Q         |          |          |     V    |
21+ 0       5.1517      1.81  |Q         |          |          |     V    |
21+ 5       5.1641      1.80  |Q         |          |          |     V    |
21+10       5.1764      1.79  |Q         |          |          |      V   |
21+15       5.1887      1.78  |Q         |          |          |      V   |
21+20       5.2008      1.76  |Q         |          |          |      V   |
21+25       5.2129      1.75  |Q         |          |          |      V   |
21+30       5.2249      1.74  |Q         |          |          |      V   |
21+35       5.2368      1.73  |Q         |          |          |      V   |
21+40       5.2486      1.72  |Q         |          |          |      V   |
21+45       5.2604      1.71  |Q         |          |          |      V   |
21+50       5.2720      1.70  |Q         |          |          |      V   |
```

```
  21+55       5.2836      1.69  |Q        |         |         |      V  |
  22+ 0       5.2952      1.68  |Q        |         |         |      V  |
  22+ 5       5.3066      1.66  |Q        |         |         |      V  |
  22+10       5.3180      1.66  |Q        |         |         |       V |
  22+15       5.3294      1.65  |Q        |         |         |       V |
  22+20       5.3406      1.64  |Q        |         |         |       V |
  22+25       5.3518      1.63  |Q        |         |         |       V |
  22+30       5.3630      1.62  |Q        |         |         |       V |
  22+35       5.3741      1.61  |Q        |         |         |       V |
  22+40       5.3851      1.60  |Q        |         |         |       V |
  22+45       5.3960      1.59  |Q        |         |         |       V |
  22+50       5.4069      1.58  |Q        |         |         |       V |
  22+55       5.4178      1.57  |Q        |         |         |       V |
  23+ 0       5.4286      1.57  |Q        |         |         |       V |
  23+ 5       5.4393      1.56  |Q        |         |         |       V |
  23+10       5.4500      1.55  |Q        |         |         |       V |
  23+15       5.4606      1.54  |Q        |         |         |        V|
  23+20       5.4712      1.54  |Q        |         |         |        V|
  23+25       5.4817      1.53  |Q        |         |         |        V|
  23+30       5.4922      1.52  |Q        |         |         |        V|
  23+35       5.5026      1.51  |Q        |         |         |        V|
  23+40       5.5130      1.51  |Q        |         |         |        V|
  23+45       5.5233      1.50  |Q        |         |         |        V|
  23+50       5.5336      1.49  |Q        |         |         |        V|
  23+55       5.5438      1.49  |Q        |         |         |        V|
  24+ 0       5.5540      1.48  |Q        |         |         |        V|
  24+ 5       5.5639      1.43  |Q        |         |         |        V|
  24+10       5.5728      1.29  |Q        |         |         |        V|
  24+15       5.5793      0.94  Q         |         |         |        V|
  24+20       5.5830      0.54  Q         |         |         |        V|
  24+25       5.5856      0.38  Q         |         |         |        V|
  24+30       5.5875      0.27  Q         |         |         |        V|
  24+35       5.5889      0.20  Q         |         |         |        V|
  24+40       5.5898      0.14  Q         |         |         |        V|
  24+45       5.5905      0.10  Q         |         |         |        V|
  24+50       5.5909      0.06  Q         |         |         |        V|
  24+55       5.5912      0.04  Q         |         |         |        V|
  25+ 0       5.5914      0.03  Q         |         |         |        V|
  25+ 5       5.5916      0.02  Q         |         |         |        V|
  25+10       5.5917      0.02  Q         |         |         |        V|
  25+15       5.5918      0.01  Q         |         |         |        V|
  25+20       5.5919      0.01  Q         |         |         |        V|
  25+25       5.5919      0.01  Q         |         |         |        V|
  25+30       5.5919      0.00  Q         |         |         |        V|
  25+35       5.5919      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

Area ‘E’ – 10 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/17/24

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------------------------------------------

San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'E'
10 YEAR 24 HOUR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            36.66            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 74.9      74.9         36.66      1.000     0.455    1.000    0.455
```

```
Area-averaged adjusted loss rate Fm (In/Hr) =  0.455

********* Area-Averaged low loss rate fraction, Yb **********

Area       Area          SCS CN    SCS CN      S     Pervious
 (Ac.)      Fract         (AMC2)    (AMC2)           Yield Fr
    36.66   1.000         74.9      74.9       3.35     0.603

Area-averaged catchment yield fraction, Y =  0.603
Area-averaged low loss fraction, Yb =  0.397
User entry of time of concentration  =   0.293 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area =      36.66(Ac.)
Catchment Lag time =   0.234 hours
Unit interval =   5.000 minutes
Unit interval percentage of lag time = 35.5518
Hydrograph baseflow =     0.00(CFS)
Average maximum watershed loss rate(Fm) =  0.455(In/Hr)
Average low loss rate fraction (Yb) = 0.397 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall =  0.475(In)
Computed peak 30-minute rainfall =  0.812(In)
Specified peak 1-hour rainfall =  1.000(In)
Computed peak 3-hour rainfall =  1.973(In)
Specified peak 6-hour rainfall =  3.029(In)
Specified peak 24-hour rainfall =  7.291(In)


Rainfall depth area reduction factors:
Using a total area of      36.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998     Adjusted rainfall =  0.474(In)
30-minute factor = 0.998    Adjusted rainfall =  0.811(In)
1-hour factor = 0.998       Adjusted rainfall =  0.998(In)
3-hour factor = 1.000       Adjusted rainfall =  1.972(In)
6-hour factor = 1.000       Adjusted rainfall =  3.028(In)
24-hour factor = 1.000      Adjusted rainfall =  7.291(In)
------------------------------------------------------------------------

                     U n i t  H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Interval          'S' Graph          Unit Hydrograph
Number            Mean values             ((CFS))
------------------------------------------------------------------------
               (K =       443.36 (CFS))

  1                2.675                  11.860
  2               12.024                  41.451
  3               35.644                 104.718
  4               63.026                 121.402
  5               74.204                  49.558
  6               81.479                  32.252
  7               86.684                  23.079
  8               90.577                  17.258
  9               93.485                  12.896
 10               95.602                   9.386
 11               97.088                   6.587
 12               97.988                   3.990
 13               98.429                   1.953
 14               98.799                   1.644
 15               99.093                   1.300
 16               99.316                   0.991
 17               99.592                   1.221
 18               99.789                   0.873
 19               99.913                   0.549
 20              100.000                   0.388
------------------------------------------------------------------------
Peak Unit   Adjusted mass rainfall  Unit rainfall
Number              (In)                (In)
  1              0.4737              0.4737
  2              0.5832              0.1095
```

3	0.6586	0.0754
4	0.7180	0.0594
5	0.7677	0.0497
6	0.8109	0.0432
7	0.8492	0.0384
8	0.8839	0.0347
9	0.9157	0.0318
10	0.9451	0.0294
11	0.9726	0.0274
12	0.9983	0.0257
13	1.0491	0.0508
14	1.0984	0.0493
15	1.1464	0.0480
16	1.1931	0.0468
17	1.2388	0.0457
18	1.2835	0.0447
19	1.3272	0.0437
20	1.3701	0.0429
21	1.4122	0.0421
22	1.4535	0.0413
23	1.4941	0.0406
24	1.5340	0.0399
25	1.5733	0.0393
26	1.6120	0.0387
27	1.6502	0.0382
28	1.6878	0.0376
29	1.7249	0.0371
30	1.7615	0.0366
31	1.7977	0.0362
32	1.8334	0.0357
33	1.8687	0.0353
34	1.9036	0.0349
35	1.9382	0.0345
36	1.9723	0.0341
37	2.0060	0.0337
38	2.0394	0.0334
39	2.0724	0.0330
40	2.1051	0.0327
41	2.1375	0.0324
42	2.1696	0.0321
43	2.2014	0.0318
44	2.2330	0.0315
45	2.2642	0.0313
46	2.2952	0.0310
47	2.3259	0.0307
48	2.3564	0.0305
49	2.3867	0.0302
50	2.4167	0.0300
51	2.4465	0.0298
52	2.4760	0.0296
53	2.5054	0.0293
54	2.5345	0.0291
55	2.5635	0.0289
56	2.5922	0.0287
57	2.6207	0.0285
58	2.6491	0.0283
59	2.6772	0.0282
60	2.7052	0.0280
61	2.7330	0.0278
62	2.7606	0.0276
63	2.7881	0.0275
64	2.8154	0.0273
65	2.8425	0.0271
66	2.8695	0.0270
67	2.8963	0.0268
68	2.9230	0.0267
69	2.9495	0.0265
70	2.9759	0.0264
71	3.0021	0.0262
72	3.0282	0.0261
73	3.0548	0.0266

74	3.0812	0.0265
75	3.1075	0.0263
76	3.1337	0.0262
77	3.1598	0.0261
78	3.1858	0.0259
79	3.2116	0.0258
80	3.2373	0.0257
81	3.2629	0.0256
82	3.2884	0.0255
83	3.3137	0.0254
84	3.3390	0.0252
85	3.3641	0.0251
86	3.3891	0.0250
87	3.4141	0.0249
88	3.4389	0.0248
89	3.4636	0.0247
90	3.4882	0.0246
91	3.5127	0.0245
92	3.5372	0.0244
93	3.5615	0.0243
94	3.5857	0.0242
95	3.6098	0.0241
96	3.6339	0.0240
97	3.6578	0.0239
98	3.6817	0.0239
99	3.7054	0.0238
100	3.7291	0.0237
101	3.7527	0.0236
102	3.7762	0.0235
103	3.7997	0.0234
104	3.8230	0.0233
105	3.8463	0.0233
106	3.8694	0.0232
107	3.8925	0.0231
108	3.9155	0.0230
109	3.9385	0.0229
110	3.9613	0.0229
111	3.9841	0.0228
112	4.0068	0.0227
113	4.0295	0.0226
114	4.0521	0.0226
115	4.0745	0.0225
116	4.0970	0.0224
117	4.1193	0.0224
118	4.1416	0.0223
119	4.1638	0.0222
120	4.1860	0.0221
121	4.2080	0.0221
122	4.2300	0.0220
123	4.2520	0.0219
124	4.2739	0.0219
125	4.2957	0.0218
126	4.3174	0.0217
127	4.3391	0.0217
128	4.3607	0.0216
129	4.3823	0.0216
130	4.4038	0.0215
131	4.4252	0.0214
132	4.4466	0.0214
133	4.4679	0.0213
134	4.4892	0.0213
135	4.5104	0.0212
136	4.5316	0.0211
137	4.5527	0.0211
138	4.5737	0.0210
139	4.5947	0.0210
140	4.6156	0.0209
141	4.6365	0.0209
142	4.6573	0.0208
143	4.6780	0.0208
144	4.6987	0.0207

145	4.7194	0.0207
146	4.7400	0.0206
147	4.7606	0.0206
148	4.7811	0.0205
149	4.8015	0.0205
150	4.8219	0.0204
151	4.8423	0.0204
152	4.8626	0.0203
153	4.8828	0.0203
154	4.9030	0.0202
155	4.9232	0.0202
156	4.9433	0.0201
157	4.9633	0.0201
158	4.9834	0.0200
159	5.0033	0.0200
160	5.0232	0.0199
161	5.0431	0.0199
162	5.0630	0.0198
163	5.0827	0.0198
164	5.1025	0.0197
165	5.1222	0.0197
166	5.1418	0.0197
167	5.1614	0.0196
168	5.1810	0.0196
169	5.2005	0.0195
170	5.2200	0.0195
171	5.2395	0.0194
172	5.2589	0.0194
173	5.2782	0.0194
174	5.2975	0.0193
175	5.3168	0.0193
176	5.3361	0.0192
177	5.3552	0.0192
178	5.3744	0.0192
179	5.3935	0.0191
180	5.4126	0.0191
181	5.4316	0.0190
182	5.4506	0.0190
183	5.4696	0.0190
184	5.4885	0.0189
185	5.5074	0.0189
186	5.5263	0.0189
187	5.5451	0.0188
188	5.5639	0.0188
189	5.5826	0.0187
190	5.6013	0.0187
191	5.6200	0.0187
192	5.6386	0.0186
193	5.6572	0.0186
194	5.6758	0.0186
195	5.6943	0.0185
196	5.7128	0.0185
197	5.7312	0.0185
198	5.7497	0.0184
199	5.7680	0.0184
200	5.7864	0.0184
201	5.8047	0.0183
202	5.8230	0.0183
203	5.8413	0.0183
204	5.8595	0.0182
205	5.8777	0.0182
206	5.8958	0.0182
207	5.9140	0.0181
208	5.9320	0.0181
209	5.9501	0.0181
210	5.9681	0.0180
211	5.9861	0.0180
212	6.0041	0.0180
213	6.0220	0.0179
214	6.0399	0.0179
215	6.0578	0.0179

216	6.0757	0.0178
217	6.0935	0.0178
218	6.1113	0.0178
219	6.1290	0.0178
220	6.1467	0.0177
221	6.1644	0.0177
222	6.1821	0.0177
223	6.1997	0.0176
224	6.2173	0.0176
225	6.2349	0.0176
226	6.2525	0.0175
227	6.2700	0.0175
228	6.2875	0.0175
229	6.3049	0.0175
230	6.3224	0.0174
231	6.3398	0.0174
232	6.3572	0.0174
233	6.3745	0.0174
234	6.3918	0.0173
235	6.4091	0.0173
236	6.4264	0.0173
237	6.4437	0.0172
238	6.4609	0.0172
239	6.4781	0.0172
240	6.4952	0.0172
241	6.5124	0.0171
242	6.5295	0.0171
243	6.5466	0.0171
244	6.5637	0.0171
245	6.5807	0.0170
246	6.5977	0.0170
247	6.6147	0.0170
248	6.6317	0.0170
249	6.6486	0.0169
250	6.6655	0.0169
251	6.6824	0.0169
252	6.6992	0.0169
253	6.7161	0.0168
254	6.7329	0.0168
255	6.7497	0.0168
256	6.7665	0.0168
257	6.7832	0.0167
258	6.7999	0.0167
259	6.8166	0.0167
260	6.8333	0.0167
261	6.8499	0.0166
262	6.8665	0.0166
263	6.8831	0.0166
264	6.8997	0.0166
265	6.9163	0.0166
266	6.9328	0.0165
267	6.9493	0.0165
268	6.9658	0.0165
269	6.9823	0.0165
270	6.9987	0.0164
271	7.0151	0.0164
272	7.0315	0.0164
273	7.0479	0.0164
274	7.0642	0.0164
275	7.0806	0.0163
276	7.0969	0.0163
277	7.1132	0.0163
278	7.1294	0.0163
279	7.1457	0.0162
280	7.1619	0.0162
281	7.1781	0.0162
282	7.1943	0.0162
283	7.2104	0.0162
284	7.2266	0.0161
285	7.2427	0.0161
286	7.2588	0.0161

287	7.2749	0.0161
288	7.2909	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0064	0.0097
2	0.0161	0.0064	0.0097
3	0.0161	0.0064	0.0097
4	0.0161	0.0064	0.0097
5	0.0162	0.0064	0.0098
6	0.0162	0.0064	0.0098
7	0.0162	0.0065	0.0098
8	0.0163	0.0065	0.0098
9	0.0163	0.0065	0.0098
10	0.0163	0.0065	0.0098
11	0.0164	0.0065	0.0099
12	0.0164	0.0065	0.0099
13	0.0164	0.0065	0.0099
14	0.0165	0.0065	0.0099
15	0.0165	0.0066	0.0100
16	0.0165	0.0066	0.0100
17	0.0166	0.0066	0.0100
18	0.0166	0.0066	0.0100
19	0.0166	0.0066	0.0100
20	0.0167	0.0066	0.0101
21	0.0167	0.0066	0.0101
22	0.0167	0.0066	0.0101
23	0.0168	0.0067	0.0101
24	0.0168	0.0067	0.0101
25	0.0169	0.0067	0.0102
26	0.0169	0.0067	0.0102
27	0.0169	0.0067	0.0102
28	0.0170	0.0067	0.0102
29	0.0170	0.0068	0.0103
30	0.0170	0.0068	0.0103
31	0.0171	0.0068	0.0103
32	0.0171	0.0068	0.0103
33	0.0172	0.0068	0.0104
34	0.0172	0.0068	0.0104
35	0.0172	0.0068	0.0104
36	0.0173	0.0069	0.0104
37	0.0173	0.0069	0.0104
38	0.0174	0.0069	0.0105
39	0.0174	0.0069	0.0105
40	0.0174	0.0069	0.0105
41	0.0175	0.0069	0.0105
42	0.0175	0.0070	0.0106
43	0.0176	0.0070	0.0106
44	0.0176	0.0070	0.0106
45	0.0177	0.0070	0.0107
46	0.0177	0.0070	0.0107
47	0.0178	0.0070	0.0107
48	0.0178	0.0071	0.0107
49	0.0178	0.0071	0.0108
50	0.0179	0.0071	0.0108
51	0.0179	0.0071	0.0108
52	0.0180	0.0071	0.0108
53	0.0180	0.0072	0.0109
54	0.0181	0.0072	0.0109
55	0.0181	0.0072	0.0109
56	0.0182	0.0072	0.0109
57	0.0182	0.0072	0.0110
58	0.0183	0.0072	0.0110
59	0.0183	0.0073	0.0110
60	0.0184	0.0073	0.0111
61	0.0184	0.0073	0.0111
62	0.0185	0.0073	0.0111
63	0.0185	0.0074	0.0112
64	0.0186	0.0074	0.0112

65	0.0186	0.0074	0.0112
66	0.0187	0.0074	0.0113
67	0.0187	0.0074	0.0113
68	0.0188	0.0075	0.0113
69	0.0189	0.0075	0.0114
70	0.0189	0.0075	0.0114
71	0.0190	0.0075	0.0114
72	0.0190	0.0075	0.0115
73	0.0191	0.0076	0.0115
74	0.0191	0.0076	0.0115
75	0.0192	0.0076	0.0116
76	0.0192	0.0076	0.0116
77	0.0193	0.0077	0.0116
78	0.0194	0.0077	0.0117
79	0.0194	0.0077	0.0117
80	0.0195	0.0077	0.0117
81	0.0196	0.0078	0.0118
82	0.0196	0.0078	0.0118
83	0.0197	0.0078	0.0119
84	0.0197	0.0078	0.0119
85	0.0198	0.0079	0.0120
86	0.0199	0.0079	0.0120
87	0.0200	0.0079	0.0120
88	0.0200	0.0079	0.0121
89	0.0201	0.0080	0.0121
90	0.0202	0.0080	0.0122
91	0.0203	0.0080	0.0122
92	0.0203	0.0081	0.0122
93	0.0204	0.0081	0.0123
94	0.0205	0.0081	0.0123
95	0.0206	0.0082	0.0124
96	0.0206	0.0082	0.0124
97	0.0207	0.0082	0.0125
98	0.0208	0.0082	0.0125
99	0.0209	0.0083	0.0126
100	0.0209	0.0083	0.0126
101	0.0210	0.0084	0.0127
102	0.0211	0.0084	0.0127
103	0.0212	0.0084	0.0128
104	0.0213	0.0084	0.0128
105	0.0214	0.0085	0.0129
106	0.0214	0.0085	0.0129
107	0.0216	0.0086	0.0130
108	0.0216	0.0086	0.0130
109	0.0217	0.0086	0.0131
110	0.0218	0.0087	0.0132
111	0.0219	0.0087	0.0132
112	0.0220	0.0087	0.0133
113	0.0221	0.0088	0.0134
114	0.0222	0.0088	0.0134
115	0.0224	0.0089	0.0135
116	0.0224	0.0089	0.0135
117	0.0226	0.0090	0.0136
118	0.0226	0.0090	0.0136
119	0.0228	0.0090	0.0137
120	0.0229	0.0091	0.0138
121	0.0230	0.0091	0.0139
122	0.0231	0.0092	0.0139
123	0.0233	0.0092	0.0140
124	0.0233	0.0093	0.0141
125	0.0235	0.0093	0.0142
126	0.0236	0.0094	0.0142
127	0.0238	0.0094	0.0143
128	0.0239	0.0095	0.0144
129	0.0240	0.0095	0.0145
130	0.0241	0.0096	0.0145
131	0.0243	0.0097	0.0147
132	0.0244	0.0097	0.0147
133	0.0246	0.0098	0.0148
134	0.0247	0.0098	0.0149
135	0.0249	0.0099	0.0150

136	0.0250	0.0099	0.0151
137	0.0252	0.0100	0.0152
138	0.0254	0.0101	0.0153
139	0.0256	0.0102	0.0154
140	0.0257	0.0102	0.0155
141	0.0259	0.0103	0.0156
142	0.0261	0.0104	0.0157
143	0.0263	0.0105	0.0159
144	0.0265	0.0105	0.0160
145	0.0261	0.0104	0.0157
146	0.0262	0.0104	0.0158
147	0.0265	0.0105	0.0160
148	0.0267	0.0106	0.0161
149	0.0270	0.0107	0.0163
150	0.0271	0.0108	0.0164
151	0.0275	0.0109	0.0166
152	0.0276	0.0110	0.0167
153	0.0280	0.0111	0.0169
154	0.0282	0.0112	0.0170
155	0.0285	0.0113	0.0172
156	0.0287	0.0114	0.0173
157	0.0291	0.0116	0.0176
158	0.0293	0.0117	0.0177
159	0.0298	0.0118	0.0180
160	0.0300	0.0119	0.0181
161	0.0305	0.0121	0.0184
162	0.0307	0.0122	0.0185
163	0.0313	0.0124	0.0188
164	0.0315	0.0125	0.0190
165	0.0321	0.0127	0.0194
166	0.0324	0.0129	0.0195
167	0.0330	0.0131	0.0199
168	0.0334	0.0132	0.0201
169	0.0341	0.0136	0.0206
170	0.0345	0.0137	0.0208
171	0.0353	0.0140	0.0213
172	0.0357	0.0142	0.0215
173	0.0366	0.0145	0.0221
174	0.0371	0.0147	0.0224
175	0.0382	0.0151	0.0230
176	0.0387	0.0154	0.0233
177	0.0399	0.0159	0.0241
178	0.0406	0.0161	0.0245
179	0.0421	0.0167	0.0254
180	0.0429	0.0170	0.0258
181	0.0447	0.0177	0.0269
182	0.0457	0.0181	0.0275
183	0.0480	0.0191	0.0289
184	0.0493	0.0196	0.0297
185	0.0257	0.0102	0.0155
186	0.0274	0.0109	0.0165
187	0.0318	0.0126	0.0192
188	0.0347	0.0138	0.0209
189	0.0432	0.0171	0.0260
190	0.0497	0.0197	0.0300
191	0.0754	0.0300	0.0455
192	0.1095	0.0379	0.0716
193	0.4737	0.0379	0.4358
194	0.0594	0.0236	0.0358
195	0.0384	0.0152	0.0231
196	0.0294	0.0117	0.0177
197	0.0508	0.0202	0.0306
198	0.0468	0.0186	0.0282
199	0.0437	0.0174	0.0264
200	0.0413	0.0164	0.0249
201	0.0393	0.0156	0.0237
202	0.0376	0.0149	0.0227
203	0.0362	0.0144	0.0218
204	0.0349	0.0139	0.0210
205	0.0337	0.0134	0.0203
206	0.0327	0.0130	0.0197

207	0.0318	0.0126	0.0192
208	0.0310	0.0123	0.0187
209	0.0302	0.0120	0.0182
210	0.0296	0.0117	0.0178
211	0.0289	0.0115	0.0174
212	0.0283	0.0113	0.0171
213	0.0278	0.0110	0.0168
214	0.0273	0.0108	0.0165
215	0.0268	0.0106	0.0162
216	0.0264	0.0105	0.0159
217	0.0266	0.0106	0.0160
218	0.0262	0.0104	0.0158
219	0.0258	0.0103	0.0156
220	0.0255	0.0101	0.0154
221	0.0251	0.0100	0.0152
222	0.0248	0.0099	0.0150
223	0.0245	0.0097	0.0148
224	0.0242	0.0096	0.0146
225	0.0239	0.0095	0.0144
226	0.0237	0.0094	0.0143
227	0.0234	0.0093	0.0141
228	0.0232	0.0092	0.0140
229	0.0229	0.0091	0.0138
230	0.0227	0.0090	0.0137
231	0.0225	0.0089	0.0136
232	0.0223	0.0088	0.0134
233	0.0221	0.0088	0.0133
234	0.0219	0.0087	0.0132
235	0.0217	0.0086	0.0131
236	0.0215	0.0085	0.0130
237	0.0213	0.0085	0.0129
238	0.0211	0.0084	0.0128
239	0.0210	0.0083	0.0126
240	0.0208	0.0083	0.0125
241	0.0207	0.0082	0.0125
242	0.0205	0.0081	0.0124
243	0.0204	0.0081	0.0123
244	0.0202	0.0080	0.0122
245	0.0201	0.0080	0.0121
246	0.0199	0.0079	0.0120
247	0.0198	0.0079	0.0119
248	0.0197	0.0078	0.0119
249	0.0195	0.0078	0.0118
250	0.0194	0.0077	0.0117
251	0.0193	0.0077	0.0116
252	0.0192	0.0076	0.0116
253	0.0190	0.0076	0.0115
254	0.0189	0.0075	0.0114
255	0.0188	0.0075	0.0113
256	0.0187	0.0074	0.0113
257	0.0186	0.0074	0.0112
258	0.0185	0.0073	0.0111
259	0.0184	0.0073	0.0111
260	0.0183	0.0073	0.0110
261	0.0182	0.0072	0.0110
262	0.0181	0.0072	0.0109
263	0.0180	0.0071	0.0109
264	0.0179	0.0071	0.0108
265	0.0178	0.0071	0.0107
266	0.0177	0.0070	0.0107
267	0.0176	0.0070	0.0106
268	0.0175	0.0070	0.0106
269	0.0175	0.0069	0.0105
270	0.0174	0.0069	0.0105
271	0.0173	0.0069	0.0104
272	0.0172	0.0068	0.0104
273	0.0171	0.0068	0.0103
274	0.0171	0.0068	0.0103
275	0.0170	0.0067	0.0102
276	0.0169	0.0067	0.0102
277	0.0168	0.0067	0.0102

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      278              0.0168           0.0067              0.0101
      279              0.0167           0.0066              0.0101
      280              0.0166           0.0066              0.0100
      281              0.0166           0.0066              0.0100
      282              0.0165           0.0065              0.0099
      283              0.0164           0.0065              0.0099
      284              0.0164           0.0065              0.0099
      285              0.0163           0.0065              0.0098
      286              0.0162           0.0064              0.0098
      287              0.0162           0.0064              0.0097
      288              0.0161           0.0064              0.0097
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      2.74(In)
      Total effective rainfall =      4.55(In)
      Peak flow rate in flood hydrograph =     64.85(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       17.5      35.0      52.5      70.0
-------------------------------------------------------------------------
  0+ 5       0.0008      0.11  Q          |         |         |         |
  0+10       0.0043      0.52  Q          |         |         |         |
  0+15       0.0149      1.53  Q          |         |         |         |
  0+20       0.0335      2.71  VQ         |         |         |         |
  0+25       0.0555      3.19  VQ         |         |         |         |
  0+30       0.0797      3.51  V Q        |         |         |         |
  0+35       0.1055      3.74  V Q        |         |         |         |
  0+40       0.1325      3.92  V Q        |         |         |         |
  0+45       0.1603      4.05  V Q        |         |         |         |
  0+50       0.1889      4.15  V Q        |         |         |         |
  0+55       0.2180      4.22  V Q        |         |         |         |
  1+ 0       0.2473      4.27  V Q        |         |         |         |
  1+ 5       0.2769      4.29  V Q        |         |         |         |
  1+10       0.3066      4.32  V Q        |         |         |         |
  1+15       0.3365      4.34  V Q        |         |         |         |
  1+20       0.3665      4.36  |VQ        |         |         |         |
  1+25       0.3967      4.38  |VQ        |         |         |         |
  1+30       0.4270      4.40  |VQ        |         |         |         |
  1+35       0.4573      4.41  |VQ        |         |         |         |
  1+40       0.4878      4.42  |VQ        |         |         |         |
  1+45       0.5183      4.43  |VQ        |         |         |         |
  1+50       0.5489      4.44  |VQ        |         |         |         |
  1+55       0.5796      4.45  |VQ        |         |         |         |
  2+ 0       0.6103      4.46  |VQ        |         |         |         |
  2+ 5       0.6411      4.47  |VQ        |         |         |         |
  2+10       0.6719      4.48  |VQ        |         |         |         |
  2+15       0.7028      4.49  | Q        |         |         |         |
  2+20       0.7338      4.50  | Q        |         |         |         |
  2+25       0.7649      4.51  | Q        |         |         |         |
  2+30       0.7960      4.52  | Q        |         |         |         |
  2+35       0.8272      4.53  | Q        |         |         |         |
  2+40       0.8584      4.54  | Q        |         |         |         |
  2+45       0.8898      4.55  | Q        |         |         |         |
  2+50       0.9212      4.56  | Q        |         |         |         |
  2+55       0.9526      4.57  | Q        |         |         |         |
  3+ 0       0.9842      4.58  | Q        |         |         |         |
  3+ 5       1.0158      4.59  | Q        |         |         |         |
  3+10       1.0475      4.60  | QV       |         |         |         |
  3+15       1.0792      4.61  | QV       |         |         |         |
  3+20       1.1110      4.62  | QV       |         |         |         |
  3+25       1.1430      4.63  | QV       |         |         |         |
  3+30       1.1749      4.64  | QV       |         |         |         |
  3+35       1.2070      4.65  | QV       |         |         |         |
  3+40       1.2391      4.67  | QV       |         |         |         |
  3+45       1.2713      4.68  | QV       |         |         |         |
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3+50       1.3036      4.69  | QV      |         |         |         |
3+55       1.3360      4.70  | QV      |         |         |         |
4+ 0       1.3685      4.71  | QV      |         |         |         |
4+ 5       1.4010      4.72  | Q V     |         |         |         |
4+10       1.4336      4.74  | Q V     |         |         |         |
4+15       1.4663      4.75  | Q V     |         |         |         |
4+20       1.4991      4.76  | Q V     |         |         |         |
4+25       1.5319      4.77  | Q V     |         |         |         |
4+30       1.5649      4.78  | Q V     |         |         |         |
4+35       1.5979      4.80  | Q V     |         |         |         |
4+40       1.6310      4.81  | Q V     |         |         |         |
4+45       1.6642      4.82  | Q V     |         |         |         |
4+50       1.6975      4.83  | Q V     |         |         |         |
4+55       1.7309      4.85  | Q V     |         |         |         |
5+ 0       1.7643      4.86  | Q  V    |         |         |         |
5+ 5       1.7979      4.87  | Q  V    |         |         |         |
5+10       1.8316      4.89  | Q  V    |         |         |         |
5+15       1.8653      4.90  | Q  V    |         |         |         |
5+20       1.8991      4.91  | Q  V    |         |         |         |
5+25       1.9331      4.93  | Q  V    |         |         |         |
5+30       1.9671      4.94  | Q  V    |         |         |         |
5+35       2.0012      4.95  | Q  V    |         |         |         |
5+40       2.0354      4.97  | Q  V    |         |         |         |
5+45       2.0697      4.98  | Q  V    |         |         |         |
5+50       2.1041      5.00  | Q   V   |         |         |         |
5+55       2.1386      5.01  | Q   V   |         |         |         |
6+ 0       2.1733      5.03  | Q   V   |         |         |         |
6+ 5       2.2080      5.04  | Q   V   |         |         |         |
6+10       2.2428      5.06  | Q   V   |         |         |         |
6+15       2.2777      5.07  | Q   V   |         |         |         |
6+20       2.3127      5.09  | Q   V   |         |         |         |
6+25       2.3479      5.10  | Q   V   |         |         |         |
6+30       2.3831      5.12  | Q   V   |         |         |         |
6+35       2.4185      5.13  | Q   V   |         |         |         |
6+40       2.4540      5.15  | Q    V  |         |         |         |
6+45       2.4895      5.17  | Q    V  |         |         |         |
6+50       2.5252      5.18  | Q    V  |         |         |         |
6+55       2.5610      5.20  | Q    V  |         |         |         |
7+ 0       2.5969      5.22  | Q    V  |         |         |         |
7+ 5       2.6330      5.23  | Q    V  |         |         |         |
7+10       2.6691      5.25  |  Q   V  |         |         |         |
7+15       2.7054      5.27  |  Q   V  |         |         |         |
7+20       2.7418      5.29  |  Q   V  |         |         |         |
7+25       2.7784      5.30  |  Q   V  |         |         |         |
7+30       2.8150      5.32  |  Q    V |         |         |         |
7+35       2.8518      5.34  |  Q    V |         |         |         |
7+40       2.8887      5.36  |  Q    V |         |         |         |
7+45       2.9257      5.38  |  Q    V |         |         |         |
7+50       2.9629      5.40  |  Q    V |         |         |         |
7+55       3.0002      5.42  |  Q    V |         |         |         |
8+ 0       3.0376      5.44  |  Q    V |         |         |         |
8+ 5       3.0752      5.46  |  Q    V |         |         |         |
8+10       3.1129      5.48  |  Q    V |         |         |         |
8+15       3.1508      5.50  |  Q     V|         |         |         |
8+20       3.1888      5.52  |  Q     V|         |         |         |
8+25       3.2269      5.54  |  Q     V|         |         |         |
8+30       3.2652      5.56  |  Q     V|         |         |         |
8+35       3.3036      5.58  |  Q     V|         |         |         |
8+40       3.3422      5.60  |  Q     V|         |         |         |
8+45       3.3810      5.63  |  Q     V|         |         |         |
8+50       3.4199      5.65  |  Q     V|         |         |         |
8+55       3.4589      5.67  |  Q     V|         |         |         |
9+ 0       3.4982      5.70  |  Q      V         |         |         |
9+ 5       3.5376      5.72  |  Q      V         |         |         |
9+10       3.5771      5.74  |  Q      V         |         |         |
9+15       3.6168      5.77  |  Q      V         |         |         |
9+20       3.6567      5.79  |  Q      V         |         |         |
9+25       3.6968      5.82  |  Q      V         |         |         |
9+30       3.7370      5.84  |  Q      V         |         |         |
9+35       3.7775      5.87  |  Q      V         |         |         |
9+40       3.8181      5.90  |  Q      V         |         |         |
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 9+45      3.8589     5.92  |  Q      |V        |         |         |
 9+50      3.8998     5.95  |  Q      |V        |         |         |
 9+55      3.9410     5.98  |  Q      |V        |         |         |
10+ 0      3.9824     6.01  |  Q      |V        |         |         |
10+ 5      4.0240     6.04  |  Q      |V        |         |         |
10+10      4.0657     6.07  |  Q      |V        |         |         |
10+15      4.1077     6.10  |  Q      |V        |         |         |
10+20      4.1499     6.13  |  Q      |V        |         |         |
10+25      4.1923     6.16  |  Q      | V       |         |         |
10+30      4.2350     6.19  |  Q      | V       |         |         |
10+35      4.2778     6.22  |  Q      | V       |         |         |
10+40      4.3209     6.26  |  Q      | V       |         |         |
10+45      4.3642     6.29  |  Q      | V       |         |         |
10+50      4.4078     6.32  |  Q      | V       |         |         |
10+55      4.4515     6.36  |  Q      | V       |         |         |
11+ 0      4.4956     6.40  |  Q      | V       |         |         |
11+ 5      4.5399     6.43  |  Q      |  V      |         |         |
11+10      4.5844     6.47  |  Q      |  V      |         |         |
11+15      4.6293     6.51  |  Q      |  V      |         |         |
11+20      4.6743     6.55  |  Q      |  V      |         |         |
11+25      4.7197     6.59  |  Q      |  V      |         |         |
11+30      4.7654     6.63  |  Q      |  V      |         |         |
11+35      4.8113     6.67  |  Q      |  V      |         |         |
11+40      4.8575     6.71  |  Q      |  V      |         |         |
11+45      4.9041     6.76  |  Q      |   V     |         |         |
11+50      4.9509     6.80  |  Q      |   V     |         |         |
11+55      4.9981     6.85  |  Q      |   V     |         |         |
12+ 0      5.0456     6.90  |  Q      |   V     |         |         |
12+ 5      5.0934     6.94  |  Q      |   V     |         |         |
12+10      5.1414     6.97  |  Q      |   V     |         |         |
12+15      5.1895     6.99  |  Q      |   V     |         |         |
12+20      5.2377     6.99  |  Q      |    V    |         |         |
12+25      5.2861     7.03  |   Q     |    V    |         |         |
12+30      5.3348     7.07  |   Q     |    V    |         |         |
12+35      5.3838     7.12  |   Q     |    V    |         |         |
12+40      5.4333     7.18  |   Q     |    V    |         |         |
12+45      5.4831     7.23  |   Q     |    V    |         |         |
12+50      5.5333     7.29  |   Q     |    V    |         |         |
12+55      5.5840     7.36  |   Q     |     V   |         |         |
13+ 0      5.6351     7.43  |   Q     |     V   |         |         |
13+ 5      5.6868     7.50  |   Q     |     V   |         |         |
13+10      5.7389     7.57  |   Q     |     V   |         |         |
13+15      5.7916     7.65  |   Q     |     V   |         |         |
13+20      5.8448     7.73  |   Q     |     V   |         |         |
13+25      5.8985     7.81  |   Q     |     V   |         |         |
13+30      5.9529     7.89  |   Q     |      V  |         |         |
13+35      6.0079     7.98  |   Q     |      V  |         |         |
13+40      6.0635     8.08  |   Q     |      V  |         |         |
13+45      6.1198     8.17  |   Q     |      V  |         |         |
13+50      6.1768     8.28  |   Q     |      V  |         |         |
13+55      6.2345     8.38  |   Q     |      V  |         |         |
14+ 0      6.2930     8.49  |   Q     |       V |         |         |
14+ 5      6.3523     8.61  |   Q     |       V |         |         |
14+10      6.4125     8.74  |   Q     |       V |         |         |
14+15      6.4735     8.87  |    Q    |       V |         |         |
14+20      6.5356     9.01  |    Q    |       V |         |         |
14+25      6.5987     9.16  |    Q    |       V |         |         |
14+30      6.6629     9.32  |    Q    |        V|         |         |
14+35      6.7282     9.48  |    Q    |        V|         |         |
14+40      6.7947     9.66  |    Q    |        V|         |         |
14+45      6.8625     9.85  |    Q    |        V|         |         |
14+50      6.9318    10.05  |    Q    |        V|         |         |
14+55      7.0025    10.27  |    Q    |         V         |         |
15+ 0      7.0749    10.51  |     Q   |         V         |         |
15+ 5      7.1491    10.77  |     Q   |         V         |         |
15+10      7.2252    11.06  |     Q   |         V         |         |
15+15      7.3035    11.37  |     Q   |          |V       |         |
15+20      7.3842    11.72  |     Q   |          |V       |         |
15+25      7.4664    11.92  |     Q   |          |V       |         |
15+30      7.5470    11.71  |     Q   |          |V       |         |
15+35      7.6196    10.54  |     Q   |          |V       |         |
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15+40       7.6829      9.19  |    Q    |          | V       |          |
15+45       7.7457      9.12  |    Q    |          | V       |          |
15+50       7.8114      9.54  |    Q    |          | V       |          |
15+55       7.8839     10.53  |     Q   |          | V       |          |
16+ 0       7.9700     12.50  |      Q  |          | V       |          |
16+ 5       8.1093     20.23  |         |Q         |  V      |          |
16+10       8.3542     35.55  |         |          Q   V     |          |
16+15       8.7752     61.13  |         |          |    V    |   Q      |
16+20       9.2218     64.85  |         |          |     V   |      Q   |
16+25       9.4579     34.29  |         |          Q|      V  |          |
16+30       9.6341     25.59  |         |   Q      |      V  |          |
16+35       9.7840     21.76  |         | Q        |       V |          |
16+40       9.9209     19.88  |         |Q         |       V |          |
16+45      10.0424     17.65  |         Q          |       V |          |
16+50      10.1503     15.67  |       Q |          |        V|          |
16+55      10.2466     13.97  |      Q  |          |        V|          |
17+ 0      10.3322     12.43  |      Q  |          |        V|          |
17+ 5      10.4093     11.20  |     Q   |          |        V|          |
17+10      10.4831     10.71  |     Q   |          |         V          |
17+15      10.5536     10.24  |    Q    |          |         V          |
17+20      10.6212      9.81  |    Q    |          |         V          |
17+25      10.6872      9.59  |    Q    |          |         V          |
17+30      10.7503      9.16  |    Q    |          |         V          |
17+35      10.8107      8.77  |    Q    |          |         |V         |
17+40      10.8690      8.47  |   Q     |          |         |V         |
17+45      10.9249      8.11  |   Q     |          |         |V         |
17+50      10.9795      7.92  |   Q     |          |         |V         |
17+55      11.0329      7.75  |   Q     |          |         |V         |
18+ 0      11.0852      7.60  |   Q     |          |         |V         |
18+ 5      11.1365      7.45  |   Q     |          |         | V        |
18+10      11.1869      7.33  |   Q     |          |         | V        |
18+15      11.2367      7.24  |   Q     |          |         | V        |
18+20      11.2861      7.16  |   Q     |          |         | V        |
18+25      11.3347      7.07  |   Q     |          |         | V        |
18+30      11.3828      6.97  |  Q      |          |         | V        |
18+35      11.4301      6.88  |  Q      |          |         | V        |
18+40      11.4769      6.79  |  Q      |          |         |  V       |
18+45      11.5231      6.71  |  Q      |          |         |  V       |
18+50      11.5687      6.62  |  Q      |          |         |  V       |
18+55      11.6138      6.54  |  Q      |          |         |  V       |
19+ 0      11.6583      6.47  |  Q      |          |         |  V       |
19+ 5      11.7023      6.39  |  Q      |          |         |  V       |
19+10      11.7459      6.32  |  Q      |          |         |  V       |
19+15      11.7890      6.25  |  Q      |          |         |  V       |
19+20      11.8316      6.19  |  Q      |          |         |   V      |
19+25      11.8738      6.13  |  Q      |          |         |   V      |
19+30      11.9155      6.06  |  Q      |          |         |   V      |
19+35      11.9569      6.01  |  Q      |          |         |   V      |
19+40      11.9979      5.95  |  Q      |          |         |   V      |
19+45      12.0385      5.90  |  Q      |          |         |   V      |
19+50      12.0787      5.84  |  Q      |          |         |   V      |
19+55      12.1186      5.79  |  Q      |          |         |   V      |
20+ 0      12.1581      5.74  |  Q      |          |         |   V      |
20+ 5      12.1974      5.69  |  Q      |          |         |    V     |
20+10      12.2362      5.65  |  Q      |          |         |    V     |
20+15      12.2748      5.60  |  Q      |          |         |    V     |
20+20      12.3131      5.56  |  Q      |          |         |    V     |
20+25      12.3511      5.52  |  Q      |          |         |    V     |
20+30      12.3888      5.47  |  Q      |          |         |    V     |
20+35      12.4262      5.43  |  Q      |          |         |    V     |
20+40      12.4634      5.39  |  Q      |          |         |    V     |
20+45      12.5003      5.36  |  Q      |          |         |    V     |
20+50      12.5369      5.32  |  Q      |          |         |     V    |
20+55      12.5733      5.28  |  Q      |          |         |     V    |
21+ 0      12.6094      5.25  | Q       |          |         |     V    |
21+ 5      12.6453      5.21  | Q       |          |         |     V    |
21+10      12.6810      5.18  | Q       |          |         |     V    |
21+15      12.7165      5.15  | Q       |          |         |     V    |
21+20      12.7517      5.12  | Q       |          |         |     V    |
21+25      12.7867      5.08  | Q       |          |         |     V    |
21+30      12.8215      5.05  | Q       |          |         |     V    |
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   21+35      12.8561      5.02  | Q       |         |         |      V  |
   21+40      12.8905      4.99  | Q       |         |         |      V  |
   21+45      12.9247      4.97  | Q       |         |         |      V  |
   21+50      12.9587      4.94  | Q       |         |         |      V  |
   21+55      12.9926      4.91  | Q       |         |         |      V  |
   22+ 0      13.0262      4.88  | Q       |         |         |      V  |
   22+ 5      13.0597      4.86  | Q       |         |         |      V  |
   22+10      13.0929      4.83  | Q       |         |         |      V  |
   22+15      13.1260      4.81  | Q       |         |         |      V  |
   22+20      13.1590      4.78  | Q       |         |         |      V  |
   22+25      13.1917      4.76  | Q       |         |         |      V  |
   22+30      13.2243      4.73  | Q       |         |         |       V |
   22+35      13.2568      4.71  | Q       |         |         |       V |
   22+40      13.2890      4.69  | Q       |         |         |       V |
   22+45      13.3212      4.66  | Q       |         |         |       V |
   22+50      13.3531      4.64  | Q       |         |         |       V |
   22+55      13.3850      4.62  | Q       |         |         |       V |
   23+ 0      13.4166      4.60  | Q       |         |         |       V |
   23+ 5      13.4482      4.58  | Q       |         |         |       V |
   23+10      13.4795      4.56  | Q       |         |         |       V |
   23+15      13.5108      4.54  | Q       |         |         |       V |
   23+20      13.5419      4.52  | Q       |         |         |       V |
   23+25      13.5729      4.50  | Q       |         |         |        V|
   23+30      13.6037      4.48  | Q       |         |         |        V|
   23+35      13.6344      4.46  | Q       |         |         |        V|
   23+40      13.6650      4.44  | Q       |         |         |        V|
   23+45      13.6954      4.42  | Q       |         |         |        V|
   23+50      13.7258      4.40  | Q       |         |         |        V|
   23+55      13.7560      4.39  | Q       |         |         |        V|
   24+ 0      13.7860      4.37  | Q       |         |         |        V|
   24+ 5      13.8152      4.24  | Q       |         |         |        V|
   24+10      13.8415      3.82  | Q       |         |         |        V|
   24+15      13.8607      2.79  |Q        |         |         |        V|
   24+20      13.8718      1.61  Q         |         |         |        V|
   24+25      13.8795      1.12  Q         |         |         |        V|
   24+30      13.8851      0.80  Q         |         |         |        V|
   24+35      13.8890      0.58  Q         |         |         |        V|
   24+40      13.8919      0.41  Q         |         |         |        V|
   24+45      13.8938      0.28  Q         |         |         |        V|
   24+50      13.8951      0.19  Q         |         |         |        V|
   24+55      13.8960      0.13  Q         |         |         |        V|
   25+ 0      13.8966      0.09  Q         |         |         |        V|
   25+ 5      13.8971      0.07  Q         |         |         |        V|
   25+10      13.8974      0.05  Q         |         |         |        V|
   25+15      13.8977      0.04  Q         |         |         |        V|
   25+20      13.8979      0.03  Q         |         |         |        V|
   25+25      13.8980      0.02  Q         |         |         |        V|
   25+30      13.8981      0.01  Q         |         |         |        V|
   25+35      13.8981      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'E' – 25 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'E'
25 YEAR 24 HOUR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            36.66            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            36.66           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            36.66           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 74.9      74.9         36.66      1.000     0.455    1.000    0.455

Area-averaged adjusted loss rate Fm (In/Hr) =  0.455

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
36.66	1.000	74.9	74.9	3.35	0.665

Area-averaged catchment yield fraction, Y = 0.665
Area-averaged low loss fraction, Yb = 0.335
User entry of time of concentration = 0.293 (hours)

++

Watershed area = 36.66(Ac.)
Catchment Lag time = 0.234 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.5518
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.455(In/Hr)
Average low loss rate fraction (Yb) = 0.335 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 36.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.568(In)
30-minute factor = 0.998 Adjusted rainfall = 0.972(In)
1-hour factor = 0.998 Adjusted rainfall = 1.197(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

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

++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 443.36 (CFS))	
1	2.675	11.860
2	12.024	41.451
3	35.644	104.718
4	63.026	121.402
5	74.204	49.558
6	81.479	32.252
7	86.684	23.079
8	90.577	17.258
9	93.485	12.896
10	95.602	9.386
11	97.088	6.587
12	97.988	3.990
13	98.429	1.953
14	98.799	1.644
15	99.093	1.300
16	99.316	0.991
17	99.592	1.221
18	99.789	0.873
19	99.913	0.549
20	100.000	0.388

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5679	0.5679
2	0.6992	0.1313
3	0.7897	0.0904
4	0.8608	0.0712
5	0.9204	0.0596
6	0.9722	0.0517

7	1.0182	0.0460
8	1.0598	0.0416
9	1.0979	0.0381
10	1.1332	0.0353
11	1.1661	0.0329
12	1.1969	0.0308
13	1.2575	0.0606
14	1.3164	0.0589
15	1.3736	0.0573
16	1.4295	0.0558
17	1.4840	0.0545
18	1.5372	0.0533
19	1.5894	0.0522
20	1.6405	0.0511
21	1.6907	0.0502
22	1.7399	0.0492
23	1.7883	0.0484
24	1.8359	0.0476
25	1.8827	0.0468
26	1.9289	0.0461
27	1.9743	0.0455
28	2.0191	0.0448
29	2.0633	0.0442
30	2.1070	0.0436
31	2.1500	0.0431
32	2.1926	0.0425
33	2.2346	0.0420
34	2.2762	0.0416
35	2.3173	0.0411
36	2.3579	0.0406
37	2.3980	0.0401
38	2.4378	0.0397
39	2.4771	0.0393
40	2.5160	0.0389
41	2.5546	0.0386
42	2.5928	0.0382
43	2.6306	0.0379
44	2.6681	0.0375
45	2.7053	0.0372
46	2.7422	0.0369
47	2.7788	0.0366
48	2.8150	0.0363
49	2.8510	0.0360
50	2.8867	0.0357
51	2.9221	0.0354
52	2.9573	0.0352
53	2.9922	0.0349
54	3.0269	0.0346
55	3.0613	0.0344
56	3.0954	0.0342
57	3.1294	0.0339
58	3.1631	0.0337
59	3.1965	0.0335
60	3.2298	0.0333
61	3.2629	0.0331
62	3.2957	0.0328
63	3.3283	0.0326
64	3.3608	0.0324
65	3.3930	0.0322
66	3.4251	0.0321
67	3.4570	0.0319
68	3.4887	0.0317
69	3.5202	0.0315
70	3.5515	0.0313
71	3.5827	0.0312
72	3.6137	0.0310
73	3.6473	0.0336
74	3.6807	0.0335
75	3.7141	0.0333
76	3.7472	0.0332
77	3.7803	0.0330

78	3.8132	0.0329
79	3.8459	0.0327
80	3.8785	0.0326
81	3.9110	0.0325
82	3.9433	0.0323
83	3.9756	0.0322
84	4.0077	0.0321
85	4.0396	0.0320
86	4.0715	0.0318
87	4.1032	0.0317
88	4.1348	0.0316
89	4.1663	0.0315
90	4.1976	0.0314
91	4.2289	0.0313
92	4.2600	0.0311
93	4.2911	0.0310
94	4.3220	0.0309
95	4.3528	0.0308
96	4.3835	0.0307
97	4.4141	0.0306
98	4.4446	0.0305
99	4.4750	0.0304
100	4.5053	0.0303
101	4.5355	0.0302
102	4.5656	0.0301
103	4.5956	0.0300
104	4.6255	0.0299
105	4.6553	0.0298
106	4.6850	0.0297
107	4.7146	0.0296
108	4.7442	0.0295
109	4.7736	0.0294
110	4.8030	0.0294
111	4.8322	0.0293
112	4.8614	0.0292
113	4.8905	0.0291
114	4.9195	0.0290
115	4.9484	0.0289
116	4.9773	0.0288
117	5.0061	0.0288
118	5.0347	0.0287
119	5.0633	0.0286
120	5.0919	0.0285
121	5.1203	0.0284
122	5.1487	0.0284
123	5.1770	0.0283
124	5.2052	0.0282
125	5.2333	0.0281
126	5.2614	0.0281
127	5.2894	0.0280
128	5.3173	0.0279
129	5.3452	0.0279
130	5.3730	0.0278
131	5.4007	0.0277
132	5.4283	0.0276
133	5.4559	0.0276
134	5.4834	0.0275
135	5.5108	0.0274
136	5.5382	0.0274
137	5.5655	0.0273
138	5.5927	0.0272
139	5.6199	0.0272
140	5.6470	0.0271
141	5.6741	0.0270
142	5.7010	0.0270
143	5.7280	0.0269
144	5.7548	0.0269
145	5.7816	0.0268
146	5.8084	0.0267
147	5.8350	0.0267
148	5.8616	0.0266

149	5.8882	0.0266
150	5.9147	0.0265
151	5.9411	0.0264
152	5.9675	0.0264
153	5.9939	0.0263
154	6.0201	0.0263
155	6.0463	0.0262
156	6.0725	0.0262
157	6.0986	0.0261
158	6.1247	0.0260
159	6.1507	0.0260
160	6.1766	0.0259
161	6.2025	0.0259
162	6.2283	0.0258
163	6.2541	0.0258
164	6.2798	0.0257
165	6.3055	0.0257
166	6.3311	0.0256
167	6.3567	0.0256
168	6.3822	0.0255
169	6.4077	0.0255
170	6.4332	0.0254
171	6.4585	0.0254
172	6.4839	0.0253
173	6.5091	0.0253
174	6.5344	0.0252
175	6.5596	0.0252
176	6.5847	0.0251
177	6.6098	0.0251
178	6.6348	0.0250
179	6.6598	0.0250
180	6.6848	0.0250
181	6.7097	0.0249
182	6.7346	0.0249
183	6.7594	0.0248
184	6.7842	0.0248
185	6.8089	0.0247
186	6.8336	0.0247
187	6.8582	0.0246
188	6.8828	0.0246
189	6.9074	0.0246
190	6.9319	0.0245
191	6.9564	0.0245
192	6.9808	0.0244
193	7.0052	0.0244
194	7.0295	0.0243
195	7.0538	0.0243
196	7.0781	0.0243
197	7.1023	0.0242
198	7.1265	0.0242
199	7.1506	0.0241
200	7.1747	0.0241
201	7.1988	0.0241
202	7.2228	0.0240
203	7.2468	0.0240
204	7.2707	0.0239
205	7.2947	0.0239
206	7.3185	0.0239
207	7.3423	0.0238
208	7.3661	0.0238
209	7.3899	0.0238
210	7.4136	0.0237
211	7.4373	0.0237
212	7.4609	0.0236
213	7.4845	0.0236
214	7.5081	0.0236
215	7.5317	0.0235
216	7.5551	0.0235
217	7.5786	0.0235
218	7.6020	0.0234
219	7.6254	0.0234

220	7.6488	0.0234
221	7.6721	0.0233
222	7.6954	0.0233
223	7.7187	0.0233
224	7.7419	0.0232
225	7.7651	0.0232
226	7.7882	0.0232
227	7.8113	0.0231
228	7.8344	0.0231
229	7.8575	0.0231
230	7.8805	0.0230
231	7.9035	0.0230
232	7.9264	0.0230
233	7.9493	0.0229
234	7.9722	0.0229
235	7.9951	0.0229
236	8.0179	0.0228
237	8.0407	0.0228
238	8.0634	0.0228
239	8.0862	0.0227
240	8.1089	0.0227
241	8.1315	0.0227
242	8.1542	0.0226
243	8.1768	0.0226
244	8.1994	0.0226
245	8.2219	0.0225
246	8.2444	0.0225
247	8.2669	0.0225
248	8.2893	0.0225
249	8.3118	0.0224
250	8.3342	0.0224
251	8.3565	0.0224
252	8.3789	0.0223
253	8.4012	0.0223
254	8.4234	0.0223
255	8.4457	0.0222
256	8.4679	0.0222
257	8.4901	0.0222
258	8.5123	0.0222
259	8.5344	0.0221
260	8.5565	0.0221
261	8.5786	0.0221
262	8.6006	0.0221
263	8.6227	0.0220
264	8.6447	0.0220
265	8.6666	0.0220
266	8.6886	0.0219
267	8.7105	0.0219
268	8.7324	0.0219
269	8.7542	0.0219
270	8.7761	0.0218
271	8.7979	0.0218
272	8.8196	0.0218
273	8.8414	0.0218
274	8.8631	0.0217
275	8.8848	0.0217
276	8.9065	0.0217
277	8.9282	0.0217
278	8.9498	0.0216
279	8.9714	0.0216
280	8.9930	0.0216
281	9.0145	0.0215
282	9.0360	0.0215
283	9.0575	0.0215
284	9.0790	0.0215
285	9.1004	0.0214
286	9.1219	0.0214
287	9.1433	0.0214
288	9.1646	0.0214

Unit	Unit	Unit	Effective

Period (number)	Rainfall (In)	Soil-Loss (In)	Rainfall (In)
1	0.0214	0.0072	0.0142
2	0.0214	0.0072	0.0142
3	0.0214	0.0072	0.0143
4	0.0215	0.0072	0.0143
5	0.0215	0.0072	0.0143
6	0.0215	0.0072	0.0143
7	0.0216	0.0072	0.0144
8	0.0216	0.0073	0.0144
9	0.0217	0.0073	0.0144
10	0.0217	0.0073	0.0144
11	0.0218	0.0073	0.0145
12	0.0218	0.0073	0.0145
13	0.0218	0.0073	0.0145
14	0.0219	0.0073	0.0145
15	0.0219	0.0073	0.0146
16	0.0219	0.0074	0.0146
17	0.0220	0.0074	0.0146
18	0.0220	0.0074	0.0146
19	0.0221	0.0074	0.0147
20	0.0221	0.0074	0.0147
21	0.0222	0.0074	0.0147
22	0.0222	0.0074	0.0147
23	0.0222	0.0075	0.0148
24	0.0223	0.0075	0.0148
25	0.0223	0.0075	0.0148
26	0.0224	0.0075	0.0149
27	0.0224	0.0075	0.0149
28	0.0225	0.0075	0.0149
29	0.0225	0.0075	0.0150
30	0.0225	0.0076	0.0150
31	0.0226	0.0076	0.0150
32	0.0226	0.0076	0.0150
33	0.0227	0.0076	0.0151
34	0.0227	0.0076	0.0151
35	0.0228	0.0076	0.0151
36	0.0228	0.0077	0.0152
37	0.0229	0.0077	0.0152
38	0.0229	0.0077	0.0152
39	0.0230	0.0077	0.0153
40	0.0230	0.0077	0.0153
41	0.0231	0.0077	0.0153
42	0.0231	0.0078	0.0154
43	0.0232	0.0078	0.0154
44	0.0232	0.0078	0.0154
45	0.0233	0.0078	0.0155
46	0.0233	0.0078	0.0155
47	0.0234	0.0078	0.0155
48	0.0234	0.0079	0.0156
49	0.0235	0.0079	0.0156
50	0.0235	0.0079	0.0156
51	0.0236	0.0079	0.0157
52	0.0236	0.0079	0.0157
53	0.0237	0.0080	0.0158
54	0.0238	0.0080	0.0158
55	0.0238	0.0080	0.0158
56	0.0239	0.0080	0.0159
57	0.0239	0.0080	0.0159
58	0.0240	0.0080	0.0159
59	0.0241	0.0081	0.0160
60	0.0241	0.0081	0.0160
61	0.0242	0.0081	0.0161
62	0.0242	0.0081	0.0161
63	0.0243	0.0081	0.0162
64	0.0243	0.0082	0.0162
65	0.0244	0.0082	0.0162
66	0.0245	0.0082	0.0163
67	0.0246	0.0082	0.0163
68	0.0246	0.0082	0.0163

69	0.0247	0.0083	0.0164
70	0.0247	0.0083	0.0164
71	0.0248	0.0083	0.0165
72	0.0249	0.0083	0.0165
73	0.0250	0.0084	0.0166
74	0.0250	0.0084	0.0166
75	0.0251	0.0084	0.0167
76	0.0251	0.0084	0.0167
77	0.0252	0.0085	0.0168
78	0.0253	0.0085	0.0168
79	0.0254	0.0085	0.0169
80	0.0254	0.0085	0.0169
81	0.0255	0.0086	0.0170
82	0.0256	0.0086	0.0170
83	0.0257	0.0086	0.0171
84	0.0257	0.0086	0.0171
85	0.0258	0.0087	0.0172
86	0.0259	0.0087	0.0172
87	0.0260	0.0087	0.0173
88	0.0260	0.0087	0.0173
89	0.0262	0.0088	0.0174
90	0.0262	0.0088	0.0174
91	0.0263	0.0088	0.0175
92	0.0264	0.0088	0.0175
93	0.0265	0.0089	0.0176
94	0.0266	0.0089	0.0177
95	0.0267	0.0089	0.0177
96	0.0267	0.0090	0.0178
97	0.0269	0.0090	0.0179
98	0.0269	0.0090	0.0179
99	0.0270	0.0091	0.0180
100	0.0271	0.0091	0.0180
101	0.0272	0.0091	0.0181
102	0.0273	0.0092	0.0181
103	0.0274	0.0092	0.0182
104	0.0275	0.0092	0.0183
105	0.0276	0.0093	0.0184
106	0.0277	0.0093	0.0184
107	0.0279	0.0093	0.0185
108	0.0279	0.0094	0.0186
109	0.0281	0.0094	0.0187
110	0.0281	0.0094	0.0187
111	0.0283	0.0095	0.0188
112	0.0284	0.0095	0.0189
113	0.0285	0.0096	0.0190
114	0.0286	0.0096	0.0190
115	0.0288	0.0096	0.0191
116	0.0288	0.0097	0.0192
117	0.0290	0.0097	0.0193
118	0.0291	0.0098	0.0193
119	0.0293	0.0098	0.0195
120	0.0294	0.0098	0.0195
121	0.0295	0.0099	0.0196
122	0.0296	0.0099	0.0197
123	0.0298	0.0100	0.0198
124	0.0299	0.0100	0.0199
125	0.0301	0.0101	0.0200
126	0.0302	0.0101	0.0201
127	0.0304	0.0102	0.0202
128	0.0305	0.0102	0.0203
129	0.0307	0.0103	0.0204
130	0.0308	0.0103	0.0205
131	0.0310	0.0104	0.0206
132	0.0311	0.0104	0.0207
133	0.0314	0.0105	0.0208
134	0.0315	0.0106	0.0209
135	0.0317	0.0106	0.0211
136	0.0318	0.0107	0.0212
137	0.0321	0.0108	0.0213
138	0.0322	0.0108	0.0214
139	0.0325	0.0109	0.0216

140	0.0326	0.0109	0.0217
141	0.0329	0.0110	0.0219
142	0.0330	0.0111	0.0220
143	0.0333	0.0112	0.0221
144	0.0335	0.0112	0.0222
145	0.0310	0.0104	0.0206
146	0.0312	0.0105	0.0207
147	0.0315	0.0106	0.0209
148	0.0317	0.0106	0.0211
149	0.0321	0.0108	0.0213
150	0.0322	0.0108	0.0214
151	0.0326	0.0109	0.0217
152	0.0328	0.0110	0.0218
153	0.0333	0.0112	0.0221
154	0.0335	0.0112	0.0223
155	0.0339	0.0114	0.0226
156	0.0342	0.0115	0.0227
157	0.0346	0.0116	0.0230
158	0.0349	0.0117	0.0232
159	0.0354	0.0119	0.0235
160	0.0357	0.0120	0.0237
161	0.0363	0.0122	0.0241
162	0.0366	0.0123	0.0243
163	0.0372	0.0125	0.0247
164	0.0375	0.0126	0.0249
165	0.0382	0.0128	0.0254
166	0.0386	0.0129	0.0256
167	0.0393	0.0132	0.0261
168	0.0397	0.0133	0.0264
169	0.0406	0.0136	0.0270
170	0.0411	0.0138	0.0273
171	0.0420	0.0141	0.0279
172	0.0425	0.0143	0.0283
173	0.0436	0.0146	0.0290
174	0.0442	0.0148	0.0294
175	0.0455	0.0152	0.0302
176	0.0461	0.0155	0.0307
177	0.0476	0.0160	0.0316
178	0.0484	0.0162	0.0322
179	0.0502	0.0168	0.0333
180	0.0511	0.0171	0.0340
181	0.0533	0.0179	0.0354
182	0.0545	0.0183	0.0362
183	0.0573	0.0192	0.0381
184	0.0589	0.0197	0.0391
185	0.0308	0.0103	0.0205
186	0.0329	0.0110	0.0218
187	0.0381	0.0128	0.0253
188	0.0416	0.0140	0.0277
189	0.0517	0.0174	0.0344
190	0.0596	0.0200	0.0396
191	0.0904	0.0303	0.0601
192	0.1313	0.0379	0.0934
193	0.5679	0.0379	0.5301
194	0.0712	0.0239	0.0473
195	0.0460	0.0154	0.0306
196	0.0353	0.0118	0.0234
197	0.0606	0.0203	0.0403
198	0.0558	0.0187	0.0371
199	0.0522	0.0175	0.0347
200	0.0492	0.0165	0.0327
201	0.0468	0.0157	0.0311
202	0.0448	0.0150	0.0298
203	0.0431	0.0144	0.0286
204	0.0416	0.0139	0.0276
205	0.0401	0.0135	0.0267
206	0.0389	0.0131	0.0259
207	0.0379	0.0127	0.0252
208	0.0369	0.0124	0.0245
209	0.0360	0.0121	0.0239
210	0.0352	0.0118	0.0234

211	0.0344	0.0115	0.0229
212	0.0337	0.0113	0.0224
213	0.0331	0.0111	0.0220
214	0.0324	0.0109	0.0216
215	0.0319	0.0107	0.0212
216	0.0313	0.0105	0.0208
217	0.0336	0.0113	0.0223
218	0.0332	0.0111	0.0220
219	0.0327	0.0110	0.0218
220	0.0323	0.0108	0.0215
221	0.0320	0.0107	0.0212
222	0.0316	0.0106	0.0210
223	0.0313	0.0105	0.0208
224	0.0309	0.0104	0.0206
225	0.0306	0.0103	0.0203
226	0.0303	0.0102	0.0201
227	0.0300	0.0101	0.0199
228	0.0297	0.0100	0.0198
229	0.0294	0.0099	0.0196
230	0.0292	0.0098	0.0194
231	0.0289	0.0097	0.0192
232	0.0287	0.0096	0.0191
233	0.0284	0.0095	0.0189
234	0.0282	0.0095	0.0188
235	0.0280	0.0094	0.0186
236	0.0278	0.0093	0.0185
237	0.0276	0.0092	0.0183
238	0.0274	0.0092	0.0182
239	0.0272	0.0091	0.0181
240	0.0270	0.0090	0.0179
241	0.0268	0.0090	0.0178
242	0.0266	0.0089	0.0177
243	0.0264	0.0089	0.0176
244	0.0263	0.0088	0.0175
245	0.0261	0.0088	0.0174
246	0.0259	0.0087	0.0172
247	0.0258	0.0086	0.0171
248	0.0256	0.0086	0.0170
249	0.0255	0.0085	0.0169
250	0.0253	0.0085	0.0168
251	0.0252	0.0084	0.0167
252	0.0250	0.0084	0.0166
253	0.0249	0.0084	0.0166
254	0.0248	0.0083	0.0165
255	0.0246	0.0083	0.0164
256	0.0245	0.0082	0.0163
257	0.0244	0.0082	0.0162
258	0.0243	0.0081	0.0161
259	0.0241	0.0081	0.0160
260	0.0240	0.0081	0.0160
261	0.0239	0.0080	0.0159
262	0.0238	0.0080	0.0158
263	0.0237	0.0079	0.0157
264	0.0236	0.0079	0.0157
265	0.0235	0.0079	0.0156
266	0.0234	0.0078	0.0155
267	0.0233	0.0078	0.0155
268	0.0232	0.0078	0.0154
269	0.0231	0.0077	0.0153
270	0.0230	0.0077	0.0153
271	0.0229	0.0077	0.0152
272	0.0228	0.0076	0.0151
273	0.0227	0.0076	0.0151
274	0.0226	0.0076	0.0150
275	0.0225	0.0075	0.0149
276	0.0224	0.0075	0.0149
277	0.0223	0.0075	0.0148
278	0.0222	0.0075	0.0148
279	0.0221	0.0074	0.0147
280	0.0221	0.0074	0.0147
281	0.0220	0.0074	0.0146

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      282              0.0219           0.0073              0.0145
      283              0.0218           0.0073              0.0145
      284              0.0217           0.0073              0.0144
      285              0.0217           0.0073              0.0144
      286              0.0216           0.0072              0.0143
      287              0.0215           0.0072              0.0143
      288              0.0214           0.0072              0.0142
      ------------------------------------------------------------------
      ------------------------------------------------------------------
      Total soil rain loss =      2.91(In)
      Total effective rainfall =      6.25(In)
      Peak flow rate in flood hydrograph =     80.07(CFS)
      ------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       22.5      45.0      67.5      90.0
----------------------------------------------------------------------
  0+ 5       0.0012      0.17  Q         |         |         |         |
  0+10       0.0064      0.76  Q         |         |         |         |
  0+15       0.0218      2.25  Q         |         |         |         |
  0+20       0.0492      3.97  VQ        |         |         |         |
  0+25       0.0815      4.68  V Q       |         |         |         |
  0+30       0.1170      5.15  V Q       |         |         |         |
  0+35       0.1548      5.49  V Q       |         |         |         |
  0+40       0.1943      5.74  V Q       |         |         |         |
  0+45       0.2352      5.94  V Q       |         |         |         |
  0+50       0.2771      6.08  V Q       |         |         |         |
  0+55       0.3196      6.18  V Q       |         |         |         |
  1+ 0       0.3627      6.25  V Q       |         |         |         |
  1+ 5       0.4060      6.29  V Q       |         |         |         |
  1+10       0.4496      6.33  V Q       |         |         |         |
  1+15       0.4934      6.35  |VQ       |         |         |         |
  1+20       0.5373      6.38  |VQ       |         |         |         |
  1+25       0.5814      6.41  |VQ       |         |         |         |
  1+30       0.6257      6.43  |VQ       |         |         |         |
  1+35       0.6702      6.45  |VQ       |         |         |         |
  1+40       0.7148      6.47  |VQ       |         |         |         |
  1+45       0.7594      6.48  |VQ       |         |         |         |
  1+50       0.8041      6.50  |VQ       |         |         |         |
  1+55       0.8490      6.51  |VQ       |         |         |         |
  2+ 0       0.8939      6.52  |VQ       |         |         |         |
  2+ 5       0.9389      6.53  |VQ       |         |         |         |
  2+10       0.9839      6.55  | Q       |         |         |         |
  2+15       1.0291      6.56  | Q       |         |         |         |
  2+20       1.0743      6.57  | Q       |         |         |         |
  2+25       1.1197      6.58  | Q       |         |         |         |
  2+30       1.1651      6.60  | Q       |         |         |         |
  2+35       1.2106      6.61  | Q       |         |         |         |
  2+40       1.2562      6.62  | Q       |         |         |         |
  2+45       1.3019      6.64  | Q       |         |         |         |
  2+50       1.3477      6.65  | Q       |         |         |         |
  2+55       1.3936      6.66  | Q       |         |         |         |
  3+ 0       1.4396      6.68  | QV      |         |         |         |
  3+ 5       1.4857      6.69  | QV      |         |         |         |
  3+10       1.5319      6.70  | QV      |         |         |         |
  3+15       1.5781      6.72  | QV      |         |         |         |
  3+20       1.6245      6.73  | QV      |         |         |         |
  3+25       1.6709      6.75  | QV      |         |         |         |
  3+30       1.7175      6.76  |  Q      |         |         |         |
  3+35       1.7642      6.77  |  Q      |         |         |         |
  3+40       1.8109      6.79  |  Q      |         |         |         |
  3+45       1.8578      6.80  |  Q      |         |         |         |
  3+50       1.9047      6.82  |  Q      |         |         |         |
  3+55       1.9518      6.83  |  QV     |         |         |         |
  4+ 0       1.9990      6.85  |  QV     |         |         |         |
  4+ 5       2.0463      6.86  |  QV     |         |         |         |
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 4+10      2.0936      6.88  |  QV     |         |         |         |
 4+15      2.1411      6.90  |  QV     |         |         |         |
 4+20      2.1887      6.91  |  QV     |         |         |         |
 4+25      2.2364      6.93  |  QV     |         |         |         |
 4+30      2.2842      6.94  |  QV     |         |         |         |
 4+35      2.3322      6.96  |  QV     |         |         |         |
 4+40      2.3802      6.97  |  QV     |         |         |         |
 4+45      2.4283      6.99  |  Q V    |         |         |         |
 4+50      2.4766      7.01  |  Q V    |         |         |         |
 4+55      2.5250      7.02  |  Q V    |         |         |         |
 5+ 0      2.5735      7.04  |  Q V    |         |         |         |
 5+ 5      2.6221      7.06  |  Q V    |         |         |         |
 5+10      2.6708      7.08  |  Q V    |         |         |         |
 5+15      2.7197      7.09  |  Q V    |         |         |         |
 5+20      2.7686      7.11  |  Q V    |         |         |         |
 5+25      2.8177      7.13  |  Q V    |         |         |         |
 5+30      2.8669      7.15  |  Q  V   |         |         |         |
 5+35      2.9163      7.16  |  Q  V   |         |         |         |
 5+40      2.9658      7.18  |  Q  V   |         |         |         |
 5+45      3.0154      7.20  |  Q  V   |         |         |         |
 5+50      3.0651      7.22  |  Q  V   |         |         |         |
 5+55      3.1149      7.24  |  Q  V   |         |         |         |
 6+ 0      3.1649      7.26  |  Q  V   |         |         |         |
 6+ 5      3.2150      7.28  |  Q  V   |         |         |         |
 6+10      3.2653      7.30  |  Q  V   |         |         |         |
 6+15      3.3157      7.32  |  Q  V   |         |         |         |
 6+20      3.3662      7.34  |  Q   V  |         |         |         |
 6+25      3.4168      7.36  |  Q   V  |         |         |         |
 6+30      3.4676      7.38  |  Q   V  |         |         |         |
 6+35      3.5186      7.40  |  Q   V  |         |         |         |
 6+40      3.5697      7.42  |  Q   V  |         |         |         |
 6+45      3.6209      7.44  |  Q   V  |         |         |         |
 6+50      3.6723      7.46  |  Q   V  |         |         |         |
 6+55      3.7238      7.48  |  Q   V  |         |         |         |
 7+ 0      3.7755      7.50  |  Q   V  |         |         |         |
 7+ 5      3.8273      7.53  |  Q    V |         |         |         |
 7+10      3.8793      7.55  |  Q    V |         |         |         |
 7+15      3.9314      7.57  |  Q    V |         |         |         |
 7+20      3.9837      7.59  |  Q    V |         |         |         |
 7+25      4.0362      7.62  |  Q    V |         |         |         |
 7+30      4.0888      7.64  |  Q    V |         |         |         |
 7+35      4.1416      7.66  |  Q    V |         |         |         |
 7+40      4.1945      7.69  |  Q    V |         |         |         |
 7+45      4.2476      7.71  |  Q    V |         |         |         |
 7+50      4.3009      7.74  |  Q     V|         |         |         |
 7+55      4.3544      7.76  |  Q     V|         |         |         |
 8+ 0      4.4080      7.79  |  Q     V|         |         |         |
 8+ 5      4.4618      7.81  |  Q     V|         |         |         |
 8+10      4.5158      7.84  |  Q     V|         |         |         |
 8+15      4.5700      7.86  |  Q     V|         |         |         |
 8+20      4.6243      7.89  |  Q     V|         |         |         |
 8+25      4.6788      7.92  |  Q     V|         |         |         |
 8+30      4.7336      7.95  |  Q     V|         |         |         |
 8+35      4.7885      7.97  |  Q      V         |         |         |
 8+40      4.8436      8.00  |  Q      V         |         |         |
 8+45      4.8989      8.03  |  Q      V         |         |         |
 8+50      4.9544      8.06  |  Q      V         |         |         |
 8+55      5.0101      8.09  |  Q      V         |         |         |
 9+ 0      5.0660      8.12  |  Q      V         |         |         |
 9+ 5      5.1222      8.15  |  Q      V         |         |         |
 9+10      5.1785      8.18  |  Q      V         |         |         |
 9+15      5.2351      8.21  |  Q      V         |         |         |
 9+20      5.2918      8.24  |  Q      |V        |         |         |
 9+25      5.3488      8.28  |  Q      |V        |         |         |
 9+30      5.4061      8.31  |  Q      |V        |         |         |
 9+35      5.4635      8.34  |  Q      |V        |         |         |
 9+40      5.5212      8.38  |  Q      |V        |         |         |
 9+45      5.5791      8.41  |  Q      |V        |         |         |
 9+50      5.6373      8.45  |  Q      |V        |         |         |
 9+55      5.6957      8.48  |  Q      |V        |         |         |
10+ 0      5.7544      8.52  |  Q      | V       |         |         |
```

```
10+ 5       5.8133      8.55  |  Q      | V       |         |         |
10+10       5.8725      8.59  |  Q      | V       |         |         |
10+15       5.9319      8.63  |  Q      | V       |         |         |
10+20       5.9916      8.67  |  Q      | V       |         |         |
10+25       6.0516      8.71  |  Q      | V       |         |         |
10+30       6.1119      8.75  |  Q      | V       |         |         |
10+35       6.1724      8.79  |  Q      | V       |         |         |
10+40       6.2332      8.83  |  Q      |  V      |         |         |
10+45       6.2944      8.88  |  Q      |  V      |         |         |
10+50       6.3558      8.92  |  Q      |  V      |         |         |
10+55       6.4175      8.96  |  Q      |  V      |         |         |
11+ 0       6.4796      9.01  |   Q     |  V      |         |         |
11+ 5       6.5419      9.06  |   Q     |  V      |         |         |
11+10       6.6046      9.10  |   Q     |  V      |         |         |
11+15       6.6677      9.15  |   Q     |  V      |         |         |
11+20       6.7310      9.20  |   Q     |   V     |         |         |
11+25       6.7947      9.25  |   Q     |   V     |         |         |
11+30       6.8588      9.30  |   Q     |   V     |         |         |
11+35       6.9233      9.36  |   Q     |   V     |         |         |
11+40       6.9881      9.41  |   Q     |   V     |         |         |
11+45       7.0533      9.47  |   Q     |   V     |         |         |
11+50       7.1189      9.52  |   Q     |   V     |         |         |
11+55       7.1848      9.58  |   Q     |    V    |         |         |
12+ 0       7.2512      9.64  |   Q     |    V    |         |         |
12+ 5       7.3179      9.68  |   Q     |    V    |         |         |
12+10       7.3845      9.67  |   Q     |    V    |         |         |
12+15       7.4502      9.54  |   Q     |    V    |         |         |
12+20       7.5148      9.38  |   Q     |    V    |         |         |
12+25       7.5793      9.36  |   Q     |    V    |         |         |
12+30       7.6439      9.38  |   Q     |     V   |         |         |
12+35       7.7087      9.41  |   Q     |     V   |         |         |
12+40       7.7738      9.46  |   Q     |     V   |         |         |
12+45       7.8394      9.52  |   Q     |     V   |         |         |
12+50       7.9054      9.59  |   Q     |     V   |         |         |
12+55       7.9719      9.66  |   Q     |     V   |         |         |
13+ 0       8.0391      9.74  |   Q     |     V   |         |         |
13+ 5       8.1068      9.83  |   Q     |     V   |         |         |
13+10       8.1752      9.93  |   Q     |      V  |         |         |
13+15       8.2442     10.03  |   Q     |      V  |         |         |
13+20       8.3140     10.13  |   Q     |      V  |         |         |
13+25       8.3845     10.24  |   Q     |      V  |         |         |
13+30       8.4558     10.35  |   Q     |      V  |         |         |
13+35       8.5279     10.47  |   Q     |      V  |         |         |
13+40       8.6008     10.59  |   Q     |       V |         |         |
13+45       8.6746     10.72  |   Q     |       V |         |         |
13+50       8.7494     10.85  |   Q     |       V |         |         |
13+55       8.8251     10.99  |   Q     |       V |         |         |
14+ 0       8.9018     11.14  |   Q     |       V |         |         |
14+ 5       8.9796     11.30  |    Q    |       V |         |         |
14+10       9.0586     11.46  |    Q    |       V |         |         |
14+15       9.1387     11.64  |    Q    |        V|         |         |
14+20       9.2202     11.83  |    Q    |        V|         |         |
14+25       9.3030     12.02  |    Q    |        V|         |         |
14+30       9.3873     12.23  |    Q    |        V|         |         |
14+35       9.4730     12.45  |    Q    |        V|         |         |
14+40       9.5603     12.68  |    Q    |         V         |         |
14+45       9.6494     12.93  |    Q    |         V         |         |
14+50       9.7403     13.20  |    Q    |         V         |         |
14+55       9.8332     13.49  |    Q    |         V         |         |
15+ 0       9.9283     13.81  |     Q   |         V         |         |
15+ 5      10.0258     14.15  |     Q   |         |V        |         |
15+10      10.1259     14.53  |     Q   |         |V        |         |
15+15      10.2288     14.94  |     Q   |         |V        |         |
15+20      10.3349     15.41  |     Q   |         |V        |         |
15+25      10.4429     15.68  |     Q   |         |V        |         |
15+30      10.5490     15.41  |     Q   |         | V       |         |
15+35      10.6446     13.88  |     Q   |         | V       |         |
15+40      10.7281     12.12  |    Q    |         | V       |         |
15+45      10.8109     12.03  |    Q    |         | V       |         |
15+50      10.8977     12.60  |    Q    |         | V       |         |
15+55      10.9934     13.90  |     Q   |         |  V      |         |
```

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16+ 0      11.1070     16.50  |      Q  |          |  V      |          |
16+ 5      11.2871     26.14  |         |Q         |  V      |          |
16+10      11.5966     44.94  |         |          Q|   V     |          |
16+15      12.1189     75.83  |         |           |    V    |  Q       |
16+20      12.6703     80.07  |         |           |     V   |    Q     |
16+25      12.9664     43.00  |         |          Q|      V  |          |
16+30      13.1889     32.30  |         |    Q      |      V  |          |
16+35      13.3793     27.65  |         |  Q        |       V |          |
16+40      13.5543     25.41  |         |Q          |       V |          |
16+45      13.7104     22.66  |         Q           |       V |          |
16+50      13.8495     20.20  |       Q |           |        V|          |
16+55      13.9741     18.09  |       Q |           |        V|          |
17+ 0      14.0854     16.16  |      Q  |           |        V|          |
17+ 5      14.1862     14.64  |     Q   |           |        V|          |
17+10      14.2826     14.00  |     Q   |           |        V|          |
17+15      14.3749     13.39  |    Q    |           |         V          |
17+20      14.4633     12.84  |    Q    |           |         V          |
17+25      14.5496     12.53  |    Q    |           |         V          |
17+30      14.6321     11.99  |    Q    |           |         V          |
17+35      14.7112     11.49  |    Q    |           |         V          |
17+40      14.7876     11.09  |   Q     |           |         V          |
17+45      14.8609     10.64  |   Q     |           |         |V         |
17+50      14.9324     10.39  |   Q     |           |         |V         |
17+55      15.0024     10.16  |   Q     |           |         |V         |
18+ 0      15.0710      9.96  |   Q     |           |         |V         |
18+ 5      15.1383      9.78  |   Q     |           |         |V         |
18+10      15.2049      9.67  |   Q     |           |         |V         |
18+15      15.2717      9.69  |   Q     |           |         | V        |
18+20      15.3389      9.76  |   Q     |           |         | V        |
18+25      15.4058      9.71  |   Q     |           |         | V        |
18+30      15.4721      9.63  |   Q     |           |         | V        |
18+35      15.5378      9.54  |   Q     |           |         | V        |
18+40      15.6029      9.45  |   Q     |           |         | V        |
18+45      15.6674      9.36  |   Q     |           |         | V        |
18+50      15.7313      9.27  |   Q     |           |         | V        |
18+55      15.7945      9.18  |   Q     |           |         |  V       |
19+ 0      15.8571      9.09  |   Q     |           |         |  V       |
19+ 5      15.9191      9.00  |  Q      |           |         |  V       |
19+10      15.9804      8.91  |  Q      |           |         |  V       |
19+15      16.0412      8.83  |  Q      |           |         |  V       |
19+20      16.1014      8.74  |  Q      |           |         |  V       |
19+25      16.1611      8.67  |  Q      |           |         |  V       |
19+30      16.2203      8.59  |  Q      |           |         |  V       |
19+35      16.2789      8.52  |  Q      |           |         |   V      |
19+40      16.3371      8.44  |  Q      |           |         |   V      |
19+45      16.3947      8.37  |  Q      |           |         |   V      |
19+50      16.4520      8.31  |  Q      |           |         |   V      |
19+55      16.5087      8.24  |  Q      |           |         |   V      |
20+ 0      16.5650      8.18  |  Q      |           |         |   V      |
20+ 5      16.6209      8.12  |  Q      |           |         |   V      |
20+10      16.6764      8.06  |  Q      |           |         |   V      |
20+15      16.7315      8.00  |  Q      |           |         |    V     |
20+20      16.7862      7.94  |  Q      |           |         |    V     |
20+25      16.8406      7.89  |  Q      |           |         |    V     |
20+30      16.8945      7.84  |  Q      |           |         |    V     |
20+35      16.9482      7.78  |  Q      |           |         |    V     |
20+40      17.0014      7.73  |  Q      |           |         |    V     |
20+45      17.0543      7.69  |  Q      |           |         |    V     |
20+50      17.1069      7.64  |  Q      |           |         |    V     |
20+55      17.1592      7.59  |  Q      |           |         |    V     |
21+ 0      17.2112      7.55  |  Q      |           |         |     V    |
21+ 5      17.2628      7.50  |  Q      |           |         |     V    |
21+10      17.3142      7.46  |  Q      |           |         |     V    |
21+15      17.3653      7.42  |  Q      |           |         |     V    |
21+20      17.4161      7.37  |  Q      |           |         |     V    |
21+25      17.4666      7.33  |  Q      |           |         |     V    |
21+30      17.5168      7.29  |  Q      |           |         |     V    |
21+35      17.5668      7.26  |  Q      |           |         |     V    |
21+40      17.6165      7.22  |  Q      |           |         |     V    |
21+45      17.6659      7.18  |  Q      |           |         |      V   |
21+50      17.7151      7.14  |  Q      |           |         |      V   |
```

```
  21+55      17.7641      7.11  |  Q      |         |         |      V  |
  22+ 0      17.8128      7.07  |  Q      |         |         |      V  |
  22+ 5      17.8613      7.04  |  Q      |         |         |      V  |
  22+10      17.9095      7.01  |  Q      |         |         |      V  |
  22+15      17.9575      6.97  |  Q      |         |         |      V  |
  22+20      18.0053      6.94  |  Q      |         |         |      V  |
  22+25      18.0529      6.91  |  Q      |         |         |      V  |
  22+30      18.1003      6.88  |  Q      |         |         |      V  |
  22+35      18.1474      6.85  |  Q      |         |         |       V |
  22+40      18.1944      6.82  |  Q      |         |         |       V |
  22+45      18.2411      6.79  |  Q      |         |         |       V |
  22+50      18.2877      6.76  |  Q      |         |         |       V |
  22+55      18.3340      6.73  | Q       |         |         |       V |
  23+ 0      18.3802      6.70  | Q       |         |         |       V |
  23+ 5      18.4261      6.67  | Q       |         |         |       V |
  23+10      18.4719      6.65  | Q       |         |         |       V |
  23+15      18.5175      6.62  | Q       |         |         |       V |
  23+20      18.5629      6.59  | Q       |         |         |       V |
  23+25      18.6081      6.57  | Q       |         |         |        V|
  23+30      18.6532      6.54  | Q       |         |         |        V|
  23+35      18.6981      6.52  | Q       |         |         |        V|
  23+40      18.7428      6.49  | Q       |         |         |        V|
  23+45      18.7874      6.47  | Q       |         |         |        V|
  23+50      18.8318      6.45  | Q       |         |         |        V|
  23+55      18.8760      6.42  | Q       |         |         |        V|
  24+ 0      18.9200      6.40  | Q       |         |         |        V|
  24+ 5      18.9628      6.21  | Q       |         |         |        V|
  24+10      19.0013      5.60  | Q       |         |         |        V|
  24+15      19.0295      4.09  |Q        |         |         |        V|
  24+20      19.0457      2.35  |Q        |         |         |        V|
  24+25      19.0570      1.64  Q         |         |         |        V|
  24+30      19.0652      1.18  Q         |         |         |        V|
  24+35      19.0710      0.85  Q         |         |         |        V|
  24+40      19.0751      0.60  Q         |         |         |        V|
  24+45      19.0780      0.41  Q         |         |         |        V|
  24+50      19.0799      0.28  Q         |         |         |        V|
  24+55      19.0812      0.19  Q         |         |         |        V|
  25+ 0      19.0821      0.13  Q         |         |         |        V|
  25+ 5      19.0828      0.10  Q         |         |         |        V|
  25+10      19.0833      0.08  Q         |         |         |        V|
  25+15      19.0837      0.06  Q         |         |         |        V|
  25+20      19.0840      0.04  Q         |         |         |        V|
  25+25      19.0842      0.03  Q         |         |         |        V|
  25+30      19.0843      0.01  Q         |         |         |        V|
  25+35      19.0843      0.01  Q         |         |         |        V|
----------------------------------------------------------------------
```

Area ‘E’ – 100 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'E'
100 YEAR 24 HOUR STORM
DECEMBER 17, 2024
----------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            36.66            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            36.66            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            36.66           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            36.66            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            36.66            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            36.66           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 74.9      90.9         36.66      1.000     0.175    1.000    0.175

Area-averaged adjusted loss rate Fm (In/Hr) =  0.175

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
36.66	1.000	74.9	90.9	1.00	0.907

Area-averaged catchment yield fraction, Y = 0.907
Area-averaged low loss fraction, Yb = 0.093
User entry of time of concentration = 0.293 (hours)
++
Watershed area = 36.66(Ac.)
Catchment Lag time = 0.234 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.5518
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.175(In/Hr)
Average low loss rate fraction (Yb) = 0.093 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 36.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.711(In)
30-minute factor = 0.998 Adjusted rainfall = 1.216(In)
1-hour factor = 0.998 Adjusted rainfall = 1.497(In)
3-hour factor = 1.000 Adjusted rainfall = 2.941(In)
6-hour factor = 1.000 Adjusted rainfall = 4.499(In)
24-hour factor = 1.000 Adjusted rainfall = 11.999(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 443.36 (CFS))	
1	2.675	11.860
2	12.024	41.451
3	35.644	104.718
4	63.026	121.402
5	74.204	49.558
6	81.479	32.252
7	86.684	23.079
8	90.577	17.258
9	93.485	12.896
10	95.602	9.386
11	97.088	6.587
12	97.988	3.990
13	98.429	1.953
14	98.799	1.644
15	99.093	1.300
16	99.316	0.991
17	99.592	1.221
18	99.789	0.873
19	99.913	0.549
20	100.000	0.388

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7105	0.7105
2	0.8748	0.1642
3	0.9879	0.1132
4	1.0770	0.0891
5	1.1515	0.0746
6	1.2163	0.0647

7	1.2739	0.0576
8	1.3259	0.0521
9	1.3736	0.0477
10	1.4177	0.0441
11	1.4588	0.0411
12	1.4974	0.0386
13	1.5729	0.0755
14	1.6462	0.0733
15	1.7175	0.0713
16	1.7870	0.0695
17	1.8548	0.0678
18	1.9211	0.0663
19	1.9860	0.0649
20	2.0496	0.0636
21	2.1120	0.0624
22	2.1733	0.0612
23	2.2334	0.0602
24	2.2926	0.0592
25	2.3509	0.0582
26	2.4082	0.0573
27	2.4647	0.0565
28	2.5204	0.0557
29	2.5754	0.0549
30	2.6296	0.0542
31	2.6831	0.0535
32	2.7360	0.0529
33	2.7882	0.0522
34	2.8398	0.0516
35	2.8908	0.0510
36	2.9413	0.0505
37	2.9912	0.0498
38	3.0405	0.0493
39	3.0893	0.0488
40	3.1377	0.0483
41	3.1855	0.0479
42	3.2330	0.0474
43	3.2800	0.0470
44	3.3265	0.0466
45	3.3727	0.0462
46	3.4185	0.0458
47	3.4639	0.0454
48	3.5089	0.0450
49	3.5535	0.0447
50	3.5978	0.0443
51	3.6418	0.0440
52	3.6854	0.0436
53	3.7287	0.0433
54	3.7717	0.0430
55	3.8144	0.0427
56	3.8568	0.0424
57	3.8989	0.0421
58	3.9407	0.0418
59	3.9822	0.0415
60	4.0235	0.0413
61	4.0645	0.0410
62	4.1052	0.0407
63	4.1457	0.0405
64	4.1859	0.0402
65	4.2259	0.0400
66	4.2657	0.0398
67	4.3052	0.0395
68	4.3445	0.0393
69	4.3836	0.0391
70	4.4224	0.0389
71	4.4611	0.0386
72	4.4995	0.0384
73	4.5436	0.0441
74	4.5876	0.0440
75	4.6313	0.0438
76	4.6750	0.0436
77	4.7184	0.0434

78	4.7617	0.0433
79	4.8048	0.0431
80	4.8477	0.0430
81	4.8905	0.0428
82	4.9332	0.0426
83	4.9757	0.0425
84	5.0180	0.0423
85	5.0602	0.0422
86	5.1023	0.0421
87	5.1442	0.0419
88	5.1859	0.0418
89	5.2276	0.0416
90	5.2691	0.0415
91	5.3104	0.0414
92	5.3516	0.0412
93	5.3927	0.0411
94	5.4337	0.0410
95	5.4745	0.0408
96	5.5153	0.0407
97	5.5558	0.0406
98	5.5963	0.0405
99	5.6367	0.0403
100	5.6769	0.0402
101	5.7170	0.0401
102	5.7570	0.0400
103	5.7969	0.0399
104	5.8366	0.0398
105	5.8763	0.0397
106	5.9158	0.0395
107	5.9553	0.0394
108	5.9946	0.0393
109	6.0338	0.0392
110	6.0729	0.0391
111	6.1119	0.0390
112	6.1508	0.0389
113	6.1897	0.0388
114	6.2284	0.0387
115	6.2670	0.0386
116	6.3055	0.0385
117	6.3439	0.0384
118	6.3822	0.0383
119	6.4204	0.0382
120	6.4586	0.0381
121	6.4966	0.0380
122	6.5345	0.0379
123	6.5724	0.0379
124	6.6102	0.0378
125	6.6478	0.0377
126	6.6854	0.0376
127	6.7229	0.0375
128	6.7603	0.0374
129	6.7977	0.0373
130	6.8349	0.0372
131	6.8721	0.0372
132	6.9091	0.0371
133	6.9461	0.0370
134	6.9830	0.0369
135	7.0199	0.0368
136	7.0566	0.0368
137	7.0933	0.0367
138	7.1299	0.0366
139	7.1664	0.0365
140	7.2029	0.0364
141	7.2392	0.0364
142	7.2755	0.0363
143	7.3117	0.0362
144	7.3479	0.0361
145	7.3839	0.0361
146	7.4199	0.0360
147	7.4559	0.0359
148	7.4917	0.0359

149	7.5275	0.0358
150	7.5632	0.0357
151	7.5989	0.0356
152	7.6344	0.0356
153	7.6699	0.0355
154	7.7054	0.0354
155	7.7407	0.0354
156	7.7760	0.0353
157	7.8113	0.0352
158	7.8465	0.0352
159	7.8816	0.0351
160	7.9166	0.0350
161	7.9516	0.0350
162	7.9865	0.0349
163	8.0213	0.0349
164	8.0561	0.0348
165	8.0909	0.0347
166	8.1255	0.0347
167	8.1601	0.0346
168	8.1947	0.0345
169	8.2292	0.0345
170	8.2636	0.0344
171	8.2979	0.0344
172	8.3322	0.0343
173	8.3665	0.0342
174	8.4007	0.0342
175	8.4348	0.0341
176	8.4689	0.0341
177	8.5029	0.0340
178	8.5369	0.0340
179	8.5708	0.0339
180	8.6046	0.0339
181	8.6384	0.0338
182	8.6722	0.0337
183	8.7059	0.0337
184	8.7395	0.0336
185	8.7731	0.0336
186	8.8066	0.0335
187	8.8401	0.0335
188	8.8735	0.0334
189	8.9069	0.0334
190	8.9402	0.0333
191	8.9735	0.0333
192	9.0067	0.0332
193	9.0398	0.0332
194	9.0730	0.0331
195	9.1060	0.0331
196	9.1390	0.0330
197	9.1720	0.0330
198	9.2049	0.0329
199	9.2378	0.0329
200	9.2706	0.0328
201	9.3034	0.0328
202	9.3361	0.0327
203	9.3688	0.0327
204	9.4014	0.0326
205	9.4340	0.0326
206	9.4666	0.0325
207	9.4991	0.0325
208	9.5315	0.0324
209	9.5639	0.0324
210	9.5963	0.0324
211	9.6286	0.0323
212	9.6608	0.0323
213	9.6931	0.0322
214	9.7252	0.0322
215	9.7574	0.0321
216	9.7895	0.0321
217	9.8215	0.0320
218	9.8535	0.0320
219	9.8855	0.0320

220	9.9174	0.0319
221	9.9493	0.0319
222	9.9811	0.0318
223	10.0129	0.0318
224	10.0446	0.0317
225	10.0763	0.0317
226	10.1080	0.0317
227	10.1396	0.0316
228	10.1712	0.0316
229	10.2028	0.0315
230	10.2343	0.0315
231	10.2657	0.0315
232	10.2972	0.0314
233	10.3285	0.0314
234	10.3599	0.0313
235	10.3912	0.0313
236	10.4225	0.0313
237	10.4537	0.0312
238	10.4849	0.0312
239	10.5160	0.0312
240	10.5472	0.0311
241	10.5782	0.0311
242	10.6093	0.0310
243	10.6403	0.0310
244	10.6712	0.0310
245	10.7022	0.0309
246	10.7330	0.0309
247	10.7639	0.0309
248	10.7947	0.0308
249	10.8255	0.0308
250	10.8562	0.0307
251	10.8870	0.0307
252	10.9176	0.0307
253	10.9483	0.0306
254	10.9789	0.0306
255	11.0094	0.0306
256	11.0400	0.0305
257	11.0705	0.0305
258	11.1009	0.0305
259	11.1313	0.0304
260	11.1617	0.0304
261	11.1921	0.0304
262	11.2224	0.0303
263	11.2527	0.0303
264	11.2830	0.0303
265	11.3132	0.0302
266	11.3434	0.0302
267	11.3735	0.0302
268	11.4037	0.0301
269	11.4338	0.0301
270	11.4638	0.0301
271	11.4938	0.0300
272	11.5238	0.0300
273	11.5538	0.0300
274	11.5837	0.0299
275	11.6136	0.0299
276	11.6435	0.0299
277	11.6733	0.0298
278	11.7031	0.0298
279	11.7329	0.0298
280	11.7626	0.0297
281	11.7923	0.0297
282	11.8220	0.0297
283	11.8517	0.0296
284	11.8813	0.0296
285	11.9109	0.0296
286	11.9404	0.0296
287	11.9700	0.0295
288	11.9995	0.0295

Unit	Unit	Unit	Effective

Period (number)	Rainfall (In)	Soil-Loss (In)	Rainfall (In)
1	0.0295	0.0028	0.0267
2	0.0295	0.0028	0.0268
3	0.0296	0.0028	0.0268
4	0.0296	0.0028	0.0269
5	0.0297	0.0028	0.0269
6	0.0297	0.0028	0.0269
7	0.0298	0.0028	0.0270
8	0.0298	0.0028	0.0270
9	0.0299	0.0028	0.0271
10	0.0299	0.0028	0.0271
11	0.0300	0.0028	0.0272
12	0.0300	0.0028	0.0272
13	0.0301	0.0028	0.0273
14	0.0301	0.0028	0.0273
15	0.0302	0.0028	0.0273
16	0.0302	0.0028	0.0274
17	0.0303	0.0028	0.0274
18	0.0303	0.0028	0.0275
19	0.0304	0.0028	0.0275
20	0.0304	0.0028	0.0276
21	0.0305	0.0028	0.0276
22	0.0305	0.0028	0.0276
23	0.0306	0.0029	0.0277
24	0.0306	0.0029	0.0277
25	0.0307	0.0029	0.0278
26	0.0307	0.0029	0.0278
27	0.0308	0.0029	0.0279
28	0.0308	0.0029	0.0279
29	0.0309	0.0029	0.0280
30	0.0309	0.0029	0.0280
31	0.0310	0.0029	0.0281
32	0.0310	0.0029	0.0281
33	0.0311	0.0029	0.0282
34	0.0312	0.0029	0.0282
35	0.0312	0.0029	0.0283
36	0.0313	0.0029	0.0283
37	0.0313	0.0029	0.0284
38	0.0314	0.0029	0.0285
39	0.0315	0.0029	0.0285
40	0.0315	0.0029	0.0286
41	0.0316	0.0029	0.0286
42	0.0316	0.0030	0.0287
43	0.0317	0.0030	0.0287
44	0.0317	0.0030	0.0288
45	0.0318	0.0030	0.0289
46	0.0319	0.0030	0.0289
47	0.0320	0.0030	0.0290
48	0.0320	0.0030	0.0290
49	0.0321	0.0030	0.0291
50	0.0321	0.0030	0.0291
51	0.0322	0.0030	0.0292
52	0.0323	0.0030	0.0293
53	0.0324	0.0030	0.0293
54	0.0324	0.0030	0.0294
55	0.0325	0.0030	0.0295
56	0.0325	0.0030	0.0295
57	0.0326	0.0030	0.0296
58	0.0327	0.0031	0.0296
59	0.0328	0.0031	0.0297
60	0.0328	0.0031	0.0298
61	0.0329	0.0031	0.0298
62	0.0330	0.0031	0.0299
63	0.0331	0.0031	0.0300
64	0.0331	0.0031	0.0300
65	0.0332	0.0031	0.0301
66	0.0333	0.0031	0.0302
67	0.0334	0.0031	0.0303
68	0.0334	0.0031	0.0303

69	0.0335	0.0031	0.0304
70	0.0336	0.0031	0.0304
71	0.0337	0.0031	0.0305
72	0.0337	0.0032	0.0306
73	0.0339	0.0032	0.0307
74	0.0339	0.0032	0.0307
75	0.0340	0.0032	0.0308
76	0.0341	0.0032	0.0309
77	0.0342	0.0032	0.0310
78	0.0342	0.0032	0.0311
79	0.0344	0.0032	0.0312
80	0.0344	0.0032	0.0312
81	0.0345	0.0032	0.0313
82	0.0346	0.0032	0.0314
83	0.0347	0.0032	0.0315
84	0.0348	0.0032	0.0315
85	0.0349	0.0033	0.0317
86	0.0350	0.0033	0.0317
87	0.0351	0.0033	0.0318
88	0.0352	0.0033	0.0319
89	0.0353	0.0033	0.0320
90	0.0354	0.0033	0.0321
91	0.0355	0.0033	0.0322
92	0.0356	0.0033	0.0323
93	0.0357	0.0033	0.0324
94	0.0358	0.0033	0.0324
95	0.0359	0.0034	0.0326
96	0.0360	0.0034	0.0326
97	0.0361	0.0034	0.0328
98	0.0362	0.0034	0.0328
99	0.0364	0.0034	0.0330
100	0.0364	0.0034	0.0330
101	0.0366	0.0034	0.0332
102	0.0367	0.0034	0.0332
103	0.0368	0.0034	0.0334
104	0.0369	0.0034	0.0335
105	0.0371	0.0035	0.0336
106	0.0372	0.0035	0.0337
107	0.0373	0.0035	0.0338
108	0.0374	0.0035	0.0339
109	0.0376	0.0035	0.0341
110	0.0377	0.0035	0.0342
111	0.0379	0.0035	0.0343
112	0.0379	0.0035	0.0344
113	0.0381	0.0036	0.0346
114	0.0382	0.0036	0.0347
115	0.0384	0.0036	0.0348
116	0.0385	0.0036	0.0349
117	0.0387	0.0036	0.0351
118	0.0388	0.0036	0.0352
119	0.0390	0.0036	0.0354
120	0.0391	0.0037	0.0355
121	0.0393	0.0037	0.0357
122	0.0394	0.0037	0.0358
123	0.0397	0.0037	0.0360
124	0.0398	0.0037	0.0361
125	0.0400	0.0037	0.0363
126	0.0401	0.0037	0.0364
127	0.0403	0.0038	0.0366
128	0.0405	0.0038	0.0367
129	0.0407	0.0038	0.0369
130	0.0408	0.0038	0.0370
131	0.0411	0.0038	0.0373
132	0.0412	0.0038	0.0374
133	0.0415	0.0039	0.0376
134	0.0416	0.0039	0.0377
135	0.0419	0.0039	0.0380
136	0.0421	0.0039	0.0381
137	0.0423	0.0040	0.0384
138	0.0425	0.0040	0.0385
139	0.0428	0.0040	0.0388

140	0.0430	0.0040	0.0389
141	0.0433	0.0040	0.0392
142	0.0434	0.0041	0.0394
143	0.0438	0.0041	0.0397
144	0.0440	0.0041	0.0398
145	0.0384	0.0036	0.0348
146	0.0386	0.0036	0.0350
147	0.0391	0.0036	0.0354
148	0.0393	0.0037	0.0356
149	0.0398	0.0037	0.0360
150	0.0400	0.0037	0.0363
151	0.0405	0.0038	0.0367
152	0.0407	0.0038	0.0369
153	0.0413	0.0039	0.0374
154	0.0415	0.0039	0.0377
155	0.0421	0.0039	0.0382
156	0.0424	0.0040	0.0384
157	0.0430	0.0040	0.0390
158	0.0433	0.0040	0.0393
159	0.0440	0.0041	0.0399
160	0.0443	0.0041	0.0402
161	0.0450	0.0042	0.0408
162	0.0454	0.0042	0.0411
163	0.0462	0.0043	0.0419
164	0.0466	0.0043	0.0422
165	0.0474	0.0044	0.0430
166	0.0479	0.0045	0.0434
167	0.0488	0.0046	0.0443
168	0.0493	0.0046	0.0447
169	0.0505	0.0047	0.0458
170	0.0510	0.0048	0.0463
171	0.0522	0.0049	0.0474
172	0.0529	0.0049	0.0479
173	0.0542	0.0051	0.0492
174	0.0549	0.0051	0.0498
175	0.0565	0.0053	0.0512
176	0.0573	0.0054	0.0520
177	0.0592	0.0055	0.0537
178	0.0602	0.0056	0.0546
179	0.0624	0.0058	0.0566
180	0.0636	0.0059	0.0577
181	0.0663	0.0062	0.0601
182	0.0678	0.0063	0.0615
183	0.0713	0.0067	0.0646
184	0.0733	0.0068	0.0664
185	0.0386	0.0036	0.0350
186	0.0411	0.0038	0.0373
187	0.0477	0.0045	0.0432
188	0.0521	0.0049	0.0472
189	0.0647	0.0060	0.0587
190	0.0746	0.0070	0.0676
191	0.1132	0.0106	0.1026
192	0.1642	0.0146	0.1496
193	0.7105	0.0146	0.6959
194	0.0891	0.0083	0.0807
195	0.0576	0.0054	0.0522
196	0.0441	0.0041	0.0400
197	0.0755	0.0070	0.0684
198	0.0695	0.0065	0.0630
199	0.0649	0.0061	0.0588
200	0.0612	0.0057	0.0555
201	0.0582	0.0054	0.0528
202	0.0557	0.0052	0.0505
203	0.0535	0.0050	0.0485
204	0.0516	0.0048	0.0468
205	0.0498	0.0047	0.0452
206	0.0483	0.0045	0.0438
207	0.0470	0.0044	0.0426
208	0.0458	0.0043	0.0415
209	0.0447	0.0042	0.0405
210	0.0436	0.0041	0.0396

211	0.0427	0.0040	0.0387
212	0.0418	0.0039	0.0379
213	0.0410	0.0038	0.0372
214	0.0402	0.0038	0.0365
215	0.0395	0.0037	0.0358
216	0.0389	0.0036	0.0352
217	0.0441	0.0041	0.0400
218	0.0436	0.0041	0.0395
219	0.0431	0.0040	0.0391
220	0.0426	0.0040	0.0387
221	0.0422	0.0039	0.0383
222	0.0418	0.0039	0.0379
223	0.0414	0.0039	0.0375
224	0.0410	0.0038	0.0371
225	0.0406	0.0038	0.0368
226	0.0402	0.0038	0.0365
227	0.0399	0.0037	0.0362
228	0.0395	0.0037	0.0359
229	0.0392	0.0037	0.0356
230	0.0389	0.0036	0.0353
231	0.0386	0.0036	0.0350
232	0.0383	0.0036	0.0347
233	0.0380	0.0036	0.0345
234	0.0378	0.0035	0.0342
235	0.0375	0.0035	0.0340
236	0.0372	0.0035	0.0338
237	0.0370	0.0035	0.0335
238	0.0368	0.0034	0.0333
239	0.0365	0.0034	0.0331
240	0.0363	0.0034	0.0329
241	0.0361	0.0034	0.0327
242	0.0359	0.0033	0.0325
243	0.0356	0.0033	0.0323
244	0.0354	0.0033	0.0321
245	0.0352	0.0033	0.0319
246	0.0350	0.0033	0.0318
247	0.0349	0.0033	0.0316
248	0.0347	0.0032	0.0314
249	0.0345	0.0032	0.0313
250	0.0343	0.0032	0.0311
251	0.0341	0.0032	0.0309
252	0.0340	0.0032	0.0308
253	0.0338	0.0032	0.0306
254	0.0336	0.0031	0.0305
255	0.0335	0.0031	0.0303
256	0.0333	0.0031	0.0302
257	0.0332	0.0031	0.0301
258	0.0330	0.0031	0.0299
259	0.0329	0.0031	0.0298
260	0.0327	0.0031	0.0297
261	0.0326	0.0030	0.0295
262	0.0324	0.0030	0.0294
263	0.0323	0.0030	0.0293
264	0.0322	0.0030	0.0292
265	0.0320	0.0030	0.0291
266	0.0319	0.0030	0.0289
267	0.0318	0.0030	0.0288
268	0.0317	0.0030	0.0287
269	0.0315	0.0029	0.0286
270	0.0314	0.0029	0.0285
271	0.0313	0.0029	0.0284
272	0.0312	0.0029	0.0283
273	0.0311	0.0029	0.0282
274	0.0310	0.0029	0.0281
275	0.0309	0.0029	0.0280
276	0.0307	0.0029	0.0279
277	0.0306	0.0029	0.0278
278	0.0305	0.0029	0.0277
279	0.0304	0.0028	0.0276
280	0.0303	0.0028	0.0275
281	0.0302	0.0028	0.0274

```
      282              0.0301           0.0028              0.0273
      283              0.0300           0.0028              0.0272
      284              0.0299           0.0028              0.0271
      285              0.0298           0.0028              0.0270
      286              0.0297           0.0028              0.0270
      287              0.0296           0.0028              0.0269
      288              0.0296           0.0028              0.0268
      ------------------------------------------------------------------
      ------------------------------------------------------------------
      Total soil rain loss =      1.07(In)
      Total effective rainfall =     10.93(In)
      Peak flow rate in flood hydrograph =    110.82(CFS)
      ------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       50.0     100.0     150.0     200.0
-------------------------------------------------------------------------
  0+ 5       0.0022      0.32  Q         |         |         |         |
  0+10       0.0120      1.43  Q         |         |         |         |
  0+15       0.0411      4.23  Q         |         |         |         |
  0+20       0.0926      7.48  VQ        |         |         |         |
  0+25       0.1534      8.82  VQ        |         |         |         |
  0+30       0.2201      9.69  VQ        |         |         |         |
  0+35       0.2912     10.32  V Q       |         |         |         |
  0+40       0.3656     10.80  V Q       |         |         |         |
  0+45       0.4425     11.16  V Q       |         |         |         |
  0+50       0.5212     11.43  V Q       |         |         |         |
  0+55       0.6013     11.63  V Q       |         |         |         |
  1+ 0       0.6822     11.75  V Q       |         |         |         |
  1+ 5       0.7636     11.82  V Q       |         |         |         |
  1+10       0.8455     11.88  |VQ       |         |         |         |
  1+15       0.9277     11.94  |VQ       |         |         |         |
  1+20       1.0102     11.98  |VQ       |         |         |         |
  1+25       1.0931     12.04  |VQ       |         |         |         |
  1+30       1.1763     12.08  |VQ       |         |         |         |
  1+35       1.2597     12.11  |VQ       |         |         |         |
  1+40       1.3434     12.14  |VQ       |         |         |         |
  1+45       1.4272     12.16  |VQ       |         |         |         |
  1+50       1.5111     12.18  |VQ       |         |         |         |
  1+55       1.5951     12.21  |VQ       |         |         |         |
  2+ 0       1.6793     12.23  | Q       |         |         |         |
  2+ 5       1.7637     12.25  | Q       |         |         |         |
  2+10       1.8482     12.27  | Q       |         |         |         |
  2+15       1.9328     12.29  | Q       |         |         |         |
  2+20       2.0176     12.31  | Q       |         |         |         |
  2+25       2.1025     12.33  | Q       |         |         |         |
  2+30       2.1876     12.35  | Q       |         |         |         |
  2+35       2.2728     12.37  | Q       |         |         |         |
  2+40       2.3582     12.40  | Q       |         |         |         |
  2+45       2.4437     12.42  | Q       |         |         |         |
  2+50       2.5294     12.44  | QV      |         |         |         |
  2+55       2.6152     12.46  | QV      |         |         |         |
  3+ 0       2.7012     12.49  | QV      |         |         |         |
  3+ 5       2.7874     12.51  | QV      |         |         |         |
  3+10       2.8737     12.53  | QV      |         |         |         |
  3+15       2.9602     12.56  | QV      |         |         |         |
  3+20       3.0468     12.58  | QV      |         |         |         |
  3+25       3.1336     12.60  | QV      |         |         |         |
  3+30       3.2205     12.63  | QV      |         |         |         |
  3+35       3.3077     12.65  | QV      |         |         |         |
  3+40       3.3950     12.67  | Q V     |         |         |         |
  3+45       3.4824     12.70  | Q V     |         |         |         |
  3+50       3.5700     12.72  | Q V     |         |         |         |
  3+55       3.6578     12.75  | Q V     |         |         |         |
  4+ 0       3.7458     12.77  | Q V     |         |         |         |
  4+ 5       3.8340     12.80  | Q V     |         |         |         |
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 4+10       3.9223     12.82  | Q V     |         |         |         |
 4+15       4.0108     12.85  | Q V     |         |         |         |
 4+20       4.0995     12.88  | Q V     |         |         |         |
 4+25       4.1883     12.90  | Q  V    |         |         |         |
 4+30       4.2773     12.93  | Q  V    |         |         |         |
 4+35       4.3666     12.95  | Q  V    |         |         |         |
 4+40       4.4560     12.98  | Q  V    |         |         |         |
 4+45       4.5456     13.01  | Q  V    |         |         |         |
 4+50       4.6354     13.04  | Q  V    |         |         |         |
 4+55       4.7253     13.06  | Q  V    |         |         |         |
 5+ 0       4.8155     13.09  | Q  V    |         |         |         |
 5+ 5       4.9059     13.12  | Q  V    |         |         |         |
 5+10       4.9964     13.15  | Q  V    |         |         |         |
 5+15       5.0872     13.18  | Q   V   |         |         |         |
 5+20       5.1781     13.21  | Q   V   |         |         |         |
 5+25       5.2693     13.24  | Q   V   |         |         |         |
 5+30       5.3606     13.27  | Q   V   |         |         |         |
 5+35       5.4522     13.29  | Q   V   |         |         |         |
 5+40       5.5440     13.33  | Q   V   |         |         |         |
 5+45       5.6359     13.36  | Q   V   |         |         |         |
 5+50       5.7281     13.39  | Q   V   |         |         |         |
 5+55       5.8205     13.42  | Q   V   |         |         |         |
 6+ 0       5.9132     13.45  | Q    V  |         |         |         |
 6+ 5       6.0060     13.48  | Q    V  |         |         |         |
 6+10       6.0991     13.51  | Q    V  |         |         |         |
 6+15       6.1924     13.55  | Q    V  |         |         |         |
 6+20       6.2859     13.58  | Q    V  |         |         |         |
 6+25       6.3796     13.61  | Q    V  |         |         |         |
 6+30       6.4736     13.64  | Q    V  |         |         |         |
 6+35       6.5678     13.68  | Q    V  |         |         |         |
 6+40       6.6622     13.71  | Q    V  |         |         |         |
 6+45       6.7569     13.75  | Q     V |         |         |         |
 6+50       6.8518     13.78  | Q     V |         |         |         |
 6+55       6.9470     13.82  | Q     V |         |         |         |
 7+ 0       7.0424     13.85  | Q     V |         |         |         |
 7+ 5       7.1381     13.89  | Q     V |         |         |         |
 7+10       7.2340     13.93  | Q     V |         |         |         |
 7+15       7.3301     13.96  | Q     V |         |         |         |
 7+20       7.4266     14.00  | Q     V |         |         |         |
 7+25       7.5233     14.04  | Q      V|         |         |         |
 7+30       7.6202     14.08  | Q      V|         |         |         |
 7+35       7.7174     14.12  | Q      V|         |         |         |
 7+40       7.8149     14.16  | Q      V|         |         |         |
 7+45       7.9127     14.20  | Q      V|         |         |         |
 7+50       8.0107     14.24  | Q      V|         |         |         |
 7+55       8.1091     14.28  | Q      V|         |         |         |
 8+ 0       8.2077     14.32  | Q      V|         |         |         |
 8+ 5       8.3066     14.36  | Q      V|         |         |         |
 8+10       8.4058     14.40  | Q       V         |         |         |
 8+15       8.5052     14.45  | Q       V         |         |         |
 8+20       8.6050     14.49  | Q       V         |         |         |
 8+25       8.7051     14.53  | Q       V         |         |         |
 8+30       8.8055     14.58  | Q       V         |         |         |
 8+35       8.9062     14.62  | Q       V         |         |         |
 8+40       9.0073     14.67  | Q       V         |         |         |
 8+45       9.1086     14.72  | Q       V         |         |         |
 8+50       9.2103     14.76  | Q       |V        |         |         |
 8+55       9.3123     14.81  | Q       |V        |         |         |
 9+ 0       9.4147     14.86  | Q       |V        |         |         |
 9+ 5       9.5174     14.91  | Q       |V        |         |         |
 9+10       9.6204     14.96  | Q       |V        |         |         |
 9+15       9.7238     15.01  |  Q      |V        |         |         |
 9+20       9.8275     15.06  |  Q      |V        |         |         |
 9+25       9.9316     15.12  |  Q      |V        |         |         |
 9+30      10.0361     15.17  |  Q      | V       |         |         |
 9+35      10.1409     15.22  |  Q      | V       |         |         |
 9+40      10.2462     15.28  |  Q      | V       |         |         |
 9+45      10.3518     15.33  |  Q      | V       |         |         |
 9+50      10.4578     15.39  |  Q      | V       |         |         |
 9+55      10.5642     15.45  |  Q      | V       |         |         |
10+ 0      10.6710     15.51  |  Q      | V       |         |         |
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10+ 5      10.7782     15.57  |  Q      | V       |         |         |
10+10      10.8858     15.63  |  Q      |  V      |         |         |
10+15      10.9939     15.69  |  Q      |  V      |         |         |
10+20      11.1024     15.75  |  Q      |  V      |         |         |
10+25      11.2113     15.82  |  Q      |  V      |         |         |
10+30      11.3207     15.88  |  Q      |  V      |         |         |
10+35      11.4305     15.95  |  Q      |  V      |         |         |
10+40      11.5409     16.02  |  Q      |  V      |         |         |
10+45      11.6516     16.09  |  Q      |  V      |         |         |
10+50      11.7629     16.16  |  Q      |   V     |         |         |
10+55      11.8747     16.23  |  Q      |   V     |         |         |
11+ 0      11.9870     16.30  |  Q      |   V     |         |         |
11+ 5      12.0997     16.38  |  Q      |   V     |         |         |
11+10      12.2131     16.45  |  Q      |   V     |         |         |
11+15      12.3269     16.53  |  Q      |   V     |         |         |
11+20      12.4413     16.61  |  Q      |   V     |         |         |
11+25      12.5563     16.69  |  Q      |    V    |         |         |
11+30      12.6718     16.78  |  Q      |    V    |         |         |
11+35      12.7879     16.86  |  Q      |    V    |         |         |
11+40      12.9046     16.95  |  Q      |    V    |         |         |
11+45      13.0219     17.03  |  Q      |    V    |         |         |
11+50      13.1399     17.13  |  Q      |    V    |         |         |
11+55      13.2585     17.22  |  Q      |    V    |         |         |
12+ 0      13.3777     17.32  |  Q      |     V   |         |         |
12+ 5      13.4972     17.35  |  Q      |     V   |         |         |
12+10      13.6159     17.23  |  Q      |     V   |         |         |
12+15      13.7314     16.77  |  Q      |     V   |         |         |
12+20      13.8432     16.24  |  Q      |     V   |         |         |
12+25      13.9541     16.09  |  Q      |     V   |         |         |
12+30      14.0646     16.05  |  Q      |     V   |         |         |
12+35      14.1751     16.05  |  Q      |     V   |         |         |
12+40      14.2860     16.10  |  Q      |      V  |         |         |
12+45      14.3973     16.16  |  Q      |      V  |         |         |
12+50      14.5093     16.26  |  Q      |      V  |         |         |
12+55      14.6220     16.37  |  Q      |      V  |         |         |
13+ 0      14.7357     16.51  |  Q      |      V  |         |         |
13+ 5      14.8504     16.66  |  Q      |      V  |         |         |
13+10      14.9662     16.81  |  Q      |      V  |         |         |
13+15      15.0832     16.98  |  Q      |       V |         |         |
13+20      15.2013     17.15  |  Q      |       V |         |         |
13+25      15.3206     17.33  |  Q      |       V |         |         |
13+30      15.4413     17.52  |  Q      |       V |         |         |
13+35      15.5633     17.72  |  Q      |       V |         |         |
13+40      15.6868     17.93  |  Q      |       V |         |         |
13+45      15.8118     18.14  |  Q      |       V |         |         |
13+50      15.9383     18.38  |  Q      |        V|         |         |
13+55      16.0665     18.61  |  Q      |        V|         |         |
14+ 0      16.1965     18.87  |  Q      |        V|         |         |
14+ 5      16.3282     19.13  |  Q      |        V|         |         |
14+10      16.4620     19.42  |  Q      |        V|         |         |
14+15      16.5977     19.72  |  Q      |        V|         |         |
14+20      16.7358     20.04  |   Q     |         V         |         |
14+25      16.8761     20.37  |   Q     |         V         |         |
14+30      17.0188     20.73  |   Q     |         V         |         |
14+35      17.1641     21.10  |   Q     |         V         |         |
14+40      17.3122     21.50  |   Q     |         V         |         |
14+45      17.4631     21.92  |   Q     |         V         |         |
14+50      17.6173     22.38  |   Q     |         |V        |         |
14+55      17.7748     22.88  |   Q     |         |V        |         |
15+ 0      17.9361     23.42  |   Q     |         |V        |         |
15+ 5      18.1014     24.00  |   Q     |         |V        |         |
15+10      18.2712     24.65  |   Q     |         |V        |         |
15+15      18.4458     25.36  |    Q    |         | V       |         |
15+20      18.6260     26.16  |    Q    |         | V       |         |
15+25      18.8093     26.62  |    Q    |         | V       |         |
15+30      18.9896     26.17  |    Q    |         | V       |         |
15+35      19.1520     23.59  |   Q     |         | V       |         |
15+40      19.2941     20.63  |   Q     |         |  V      |         |
15+45      19.4353     20.49  |   Q     |         |  V      |         |
15+50      19.5832     21.48  |   Q     |         |  V      |         |
15+55      19.7464     23.70  |   Q     |         |  V      |         |
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 16+ 0      19.9394     28.02  |    Q     |          |  V       |          |
 16+ 5      20.2268     41.72  |        Q |          |    V     |          |
 16+10      20.6883     67.02  |          |  Q       |    V     |          |
 16+15      21.4210    106.37  |          |          |Q   V     |          |
 16+20      22.1842    110.82  |          |          | Q   V    |          |
 16+25      22.6161     62.72  |          | Q        |       V  |          |
 16+30      22.9477     48.15  |          Q|         |       V  |          |
 16+35      23.2380     42.14  |        Q |          |       V  |          |
 16+40      23.5104     39.56  |       Q  |          |        V |          |
 16+45      23.7569     35.79  |       Q  |          |        V |          |
 16+50      23.9796     32.34  |      Q   |          |        V |          |
 16+55      24.1816     29.33  |     Q    |          |        V |          |
 17+ 0      24.3648     26.60  |     Q    |          |         V|          |
 17+ 5      24.5330     24.42  |    Q     |          |         V|          |
 17+10      24.6941     23.39  |    Q     |          |         V|          |
 17+15      24.8485     22.43  |    Q     |          |         V|          |
 17+20      24.9969     21.54  |    Q     |          |         V|          |
 17+25      25.1414     20.97  |    Q     |          |          V          |
 17+30      25.2800     20.13  |    Q     |          |          V          |
 17+35      25.4132     19.34  |  Q       |          |          V          |
 17+40      25.5420     18.70  |  Q       |          |          V          |
 17+45      25.6660     18.01  |  Q       |          |          V          |
 17+50      25.7871     17.59  |  Q       |          |          V          |
 17+55      25.9056     17.20  |  Q       |          |          |V         |
 18+ 0      26.0216     16.85  |  Q       |          |          |V         |
 18+ 5      26.1357     16.57  |  Q       |          |          |V         |
 18+10      26.2492     16.48  |  Q       |          |          |V         |
 18+15      26.3646     16.75  |  Q       |          |          |V         |
 18+20      26.4826     17.14  |  Q       |          |          |V         |
 18+25      26.6008     17.16  |  Q       |          |          |V         |
 18+30      26.7186     17.11  |  Q       |          |          | V        |
 18+35      26.8359     17.03  |  Q       |          |          | V        |
 18+40      26.9524     16.92  |  Q       |          |          | V        |
 18+45      27.0681     16.81  |  Q       |          |          | V        |
 18+50      27.1830     16.68  |  Q       |          |          | V        |
 18+55      27.2970     16.55  |  Q       |          |          | V        |
 19+ 0      27.4100     16.41  |  Q       |          |          | V        |
 19+ 5      27.5220     16.27  |  Q       |          |          | V        |
 19+10      27.6331     16.13  |  Q       |          |          |  V       |
 19+15      27.7433     16.00  |  Q       |          |          |  V       |
 19+20      27.8525     15.87  |  Q       |          |          |  V       |
 19+25      27.9610     15.74  |  Q       |          |          |  V       |
 19+30      28.0685     15.62  |  Q       |          |          |  V       |
 19+35      28.1753     15.50  |  Q       |          |          |  V       |
 19+40      28.2813     15.39  |  Q       |          |          |  V       |
 19+45      28.3865     15.28  |  Q       |          |          |   V      |
 19+50      28.4910     15.17  |  Q       |          |          |   V      |
 19+55      28.5947     15.06  |  Q       |          |          |   V      |
 20+ 0      28.6977     14.96  | Q        |          |          |   V      |
 20+ 5      28.8000     14.86  | Q        |          |          |   V      |
 20+10      28.9017     14.76  | Q        |          |          |   V      |
 20+15      29.0027     14.67  | Q        |          |          |   V      |
 20+20      29.1030     14.57  | Q        |          |          |   V      |
 20+25      29.2028     14.49  | Q        |          |          |   V      |
 20+30      29.3020     14.40  | Q        |          |          |    V     |
 20+35      29.4005     14.31  | Q        |          |          |    V     |
 20+40      29.4986     14.23  | Q        |          |          |    V     |
 20+45      29.5960     14.15  | Q        |          |          |    V     |
 20+50      29.6929     14.07  | Q        |          |          |    V     |
 20+55      29.7893     14.00  | Q        |          |          |    V     |
 21+ 0      29.8852     13.92  | Q        |          |          |    V     |
 21+ 5      29.9806     13.85  | Q        |          |          |    V     |
 21+10      30.0755     13.78  | Q        |          |          |     V    |
 21+15      30.1699     13.71  | Q        |          |          |     V    |
 21+20      30.2638     13.64  | Q        |          |          |     V    |
 21+25      30.3573     13.57  | Q        |          |          |     V    |
 21+30      30.4504     13.51  | Q        |          |          |     V    |
 21+35      30.5429     13.44  | Q        |          |          |     V    |
 21+40      30.6351     13.38  | Q        |          |          |     V    |
 21+45      30.7269     13.32  | Q        |          |          |     V    |
 21+50      30.8182     13.26  | Q        |          |          |     V    |
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  21+55      30.9091     13.20  | Q       |         |         |      V  |
  22+ 0      30.9996     13.14  | Q       |         |         |      V  |
  22+ 5      31.0898     13.09  | Q       |         |         |      V  |
  22+10      31.1795     13.03  | Q       |         |         |      V  |
  22+15      31.2689     12.98  | Q       |         |         |      V  |
  22+20      31.3579     12.92  | Q       |         |         |      V  |
  22+25      31.4466     12.87  | Q       |         |         |      V  |
  22+30      31.5349     12.82  | Q       |         |         |      V  |
  22+35      31.6228     12.77  | Q       |         |         |      V  |
  22+40      31.7104     12.72  | Q       |         |         |       V |
  22+45      31.7977     12.67  | Q       |         |         |       V |
  22+50      31.8846     12.62  | Q       |         |         |       V |
  22+55      31.9712     12.58  | Q       |         |         |       V |
  23+ 0      32.0575     12.53  | Q       |         |         |       V |
  23+ 5      32.1435     12.48  | Q       |         |         |       V |
  23+10      32.2291     12.44  | Q       |         |         |       V |
  23+15      32.3145     12.39  | Q       |         |         |       V |
  23+20      32.3995     12.35  | Q       |         |         |       V |
  23+25      32.4843     12.31  | Q       |         |         |       V |
  23+30      32.5687     12.26  | Q       |         |         |        V|
  23+35      32.6529     12.22  | Q       |         |         |        V|
  23+40      32.7368     12.18  | Q       |         |         |        V|
  23+45      32.8204     12.14  | Q       |         |         |        V|
  23+50      32.9038     12.10  | Q       |         |         |        V|
  23+55      32.9868     12.06  | Q       |         |         |        V|
  24+ 0      33.0696     12.02  | Q       |         |         |        V|
  24+ 5      33.1500     11.67  | Q       |         |         |        V|
  24+10      33.2225     10.52  | Q       |         |         |        V|
  24+15      33.2754      7.69  |Q        |         |         |        V|
  24+20      33.3059      4.43  Q         |         |         |        V|
  24+25      33.3272      3.09  Q         |         |         |        V|
  24+30      33.3425      2.22  Q         |         |         |        V|
  24+35      33.3534      1.59  Q         |         |         |        V|
  24+40      33.3612      1.13  Q         |         |         |        V|
  24+45      33.3666      0.78  Q         |         |         |        V|
  24+50      33.3702      0.53  Q         |         |         |        V|
  24+55      33.3726      0.35  Q         |         |         |        V|
  25+ 0      33.3742      0.24  Q         |         |         |        V|
  25+ 5      33.3755      0.19  Q         |         |         |        V|
  25+10      33.3765      0.14  Q         |         |         |        V|
  25+15      33.3773      0.11  Q         |         |         |        V|
  25+20      33.3778      0.08  Q         |         |         |        V|
  25+25      33.3782      0.05  Q         |         |         |        V|
  25+30      33.3783      0.03  Q         |         |         |        V|
  25+35      33.3784      0.01  Q         |         |         |         V
--------------------------------------------------------------------------
```

Area 'F' – 2 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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              Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
              Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'F'
2 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

       Storm Event Year = 2

       Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
       Sub-Area        Duration        Isohyetal
       (Ac.)            (hours)         (In)
Rainfall data for year 10
            6.71           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            6.71           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            6.71          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            6.71           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            6.71           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            6.71          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      60.6          6.71      1.000     0.671    1.000    0.671

Area-averaged adjusted loss rate Fm (In/Hr) =  0.671

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
6.71	1.000	78.0	60.6	6.50	0.198

Area-averaged catchment yield fraction, Y = 0.198
Area-averaged low loss fraction, Yb = 0.802
User entry of time of concentration = 0.162 (hours)
++
Watershed area = 6.71(Ac.)
Catchment Lag time = 0.130 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 64.3004
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.671(In/Hr)
Average low loss rate fraction (Yb) = 0.802 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 6.71(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.309(In)
30-minute factor = 1.000 Adjusted rainfall = 0.528(In)
1-hour factor = 1.000 Adjusted rainfall = 0.650(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

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

++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 81.15 (CFS))	
1	6.228	5.054
2	42.193	29.185
3	74.058	25.858
4	85.789	9.519
5	92.451	5.407
6	96.283	3.110
7	98.090	1.467
8	98.816	0.589
9	99.292	0.386
10	99.729	0.355
11	100.000	0.220

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3086	0.3086
2	0.3799	0.0713
3	0.4290	0.0491
4	0.4677	0.0387
5	0.5001	0.0324
6	0.5282	0.0281
7	0.5532	0.0250
8	0.5758	0.0226
9	0.5965	0.0207
10	0.6157	0.0192
11	0.6336	0.0179
12	0.6503	0.0168
13	0.6838	0.0335
14	0.7163	0.0325
15	0.7480	0.0317

16	0.7789	0.0309
17	0.8091	0.0302
18	0.8386	0.0295
19	0.8675	0.0289
20	0.8959	0.0284
21	0.9237	0.0278
22	0.9510	0.0273
23	0.9779	0.0269
24	1.0044	0.0265
25	1.0304	0.0260
26	1.0561	0.0257
27	1.0814	0.0253
28	1.1063	0.0249
29	1.1309	0.0246
30	1.1552	0.0243
31	1.1792	0.0240
32	1.2029	0.0237
33	1.2264	0.0234
34	1.2495	0.0232
35	1.2725	0.0229
36	1.2951	0.0227
37	1.3176	0.0224
38	1.3398	0.0222
39	1.3618	0.0220
40	1.3836	0.0218
41	1.4051	0.0216
42	1.4265	0.0214
43	1.4477	0.0212
44	1.4687	0.0210
45	1.4896	0.0208
46	1.5103	0.0207
47	1.5307	0.0205
48	1.5511	0.0203
49	1.5713	0.0202
50	1.5913	0.0200
51	1.6112	0.0199
52	1.6309	0.0197
53	1.6505	0.0196
54	1.6699	0.0195
55	1.6893	0.0193
56	1.7085	0.0192
57	1.7275	0.0191
58	1.7464	0.0189
59	1.7653	0.0188
60	1.7840	0.0187
61	1.8025	0.0186
62	1.8210	0.0185
63	1.8394	0.0184
64	1.8576	0.0182
65	1.8758	0.0181
66	1.8938	0.0180
67	1.9117	0.0179
68	1.9296	0.0178
69	1.9473	0.0177
70	1.9650	0.0176
71	1.9825	0.0175
72	2.0000	0.0175
73	2.0138	0.0138
74	2.0275	0.0137
75	2.0412	0.0137
76	2.0548	0.0136
77	2.0682	0.0135
78	2.0816	0.0134
79	2.0949	0.0133
80	2.1081	0.0132
81	2.1213	0.0131
82	2.1343	0.0131
83	2.1473	0.0130
84	2.1602	0.0129
85	2.1730	0.0128
86	2.1858	0.0127

87	2.1984	0.0127
88	2.2110	0.0126
89	2.2236	0.0125
90	2.2360	0.0125
91	2.2484	0.0124
92	2.2607	0.0123
93	2.2730	0.0123
94	2.2852	0.0122
95	2.2973	0.0121
96	2.3094	0.0121
97	2.3214	0.0120
98	2.3333	0.0119
99	2.3452	0.0119
100	2.3570	0.0118
101	2.3687	0.0118
102	2.3804	0.0117
103	2.3921	0.0116
104	2.4037	0.0116
105	2.4152	0.0115
106	2.4267	0.0115
107	2.4381	0.0114
108	2.4494	0.0114
109	2.4608	0.0113
110	2.4720	0.0113
111	2.4832	0.0112
112	2.4944	0.0112
113	2.5055	0.0111
114	2.5166	0.0111
115	2.5276	0.0110
116	2.5385	0.0110
117	2.5495	0.0109
118	2.5603	0.0109
119	2.5712	0.0108
120	2.5819	0.0108
121	2.5927	0.0107
122	2.6034	0.0107
123	2.6140	0.0106
124	2.6246	0.0106
125	2.6352	0.0106
126	2.6457	0.0105
127	2.6562	0.0105
128	2.6666	0.0104
129	2.6770	0.0104
130	2.6874	0.0104
131	2.6977	0.0103
132	2.7080	0.0103
133	2.7182	0.0102
134	2.7284	0.0102
135	2.7386	0.0102
136	2.7487	0.0101
137	2.7588	0.0101
138	2.7688	0.0101
139	2.7788	0.0100
140	2.7888	0.0100
141	2.7988	0.0099
142	2.8087	0.0099
143	2.8185	0.0099
144	2.8284	0.0098
145	2.8382	0.0098
146	2.8480	0.0098
147	2.8577	0.0097
148	2.8674	0.0097
149	2.8771	0.0097
150	2.8867	0.0096
151	2.8963	0.0096
152	2.9059	0.0096
153	2.9154	0.0095
154	2.9249	0.0095
155	2.9344	0.0095
156	2.9439	0.0095
157	2.9533	0.0094

158	2.9627	0.0094
159	2.9721	0.0094
160	2.9814	0.0093
161	2.9907	0.0093
162	3.0000	0.0093
163	3.0092	0.0092
164	3.0184	0.0092
165	3.0276	0.0092
166	3.0368	0.0092
167	3.0459	0.0091
168	3.0550	0.0091
169	3.0641	0.0091
170	3.0731	0.0091
171	3.0822	0.0090
172	3.0912	0.0090
173	3.1001	0.0090
174	3.1091	0.0089
175	3.1180	0.0089
176	3.1269	0.0089
177	3.1358	0.0089
178	3.1446	0.0088
179	3.1534	0.0088
180	3.1622	0.0088
181	3.1710	0.0088
182	3.1798	0.0087
183	3.1885	0.0087
184	3.1972	0.0087
185	3.2059	0.0087
186	3.2145	0.0087
187	3.2231	0.0086
188	3.2317	0.0086
189	3.2403	0.0086
190	3.2489	0.0086
191	3.2574	0.0085
192	3.2659	0.0085
193	3.2744	0.0085
194	3.2829	0.0085
195	3.2914	0.0085
196	3.2998	0.0084
197	3.3082	0.0084
198	3.3166	0.0084
199	3.3250	0.0084
200	3.3333	0.0083
201	3.3416	0.0083
202	3.3499	0.0083
203	3.3582	0.0083
204	3.3665	0.0083
205	3.3747	0.0082
206	3.3829	0.0082
207	3.3911	0.0082
208	3.3993	0.0082
209	3.4075	0.0082
210	3.4156	0.0081
211	3.4237	0.0081
212	3.4318	0.0081
213	3.4399	0.0081
214	3.4480	0.0081
215	3.4560	0.0080
216	3.4641	0.0080
217	3.4721	0.0080
218	3.4801	0.0080
219	3.4880	0.0080
220	3.4960	0.0080
221	3.5039	0.0079
222	3.5118	0.0079
223	3.5197	0.0079
224	3.5276	0.0079
225	3.5355	0.0079
226	3.5433	0.0078
227	3.5512	0.0078
228	3.5590	0.0078

229	3.5668	0.0078
230	3.5746	0.0078
231	3.5823	0.0078
232	3.5901	0.0077
233	3.5978	0.0077
234	3.6055	0.0077
235	3.6132	0.0077
236	3.6209	0.0077
237	3.6286	0.0077
238	3.6362	0.0076
239	3.6438	0.0076
240	3.6514	0.0076
241	3.6590	0.0076
242	3.6666	0.0076
243	3.6742	0.0076
244	3.6818	0.0076
245	3.6893	0.0075
246	3.6968	0.0075
247	3.7043	0.0075
248	3.7118	0.0075
249	3.7193	0.0075
250	3.7267	0.0075
251	3.7342	0.0074
252	3.7416	0.0074
253	3.7490	0.0074
254	3.7564	0.0074
255	3.7638	0.0074
256	3.7712	0.0074
257	3.7786	0.0074
258	3.7859	0.0073
259	3.7932	0.0073
260	3.8005	0.0073
261	3.8079	0.0073
262	3.8151	0.0073
263	3.8224	0.0073
264	3.8297	0.0073
265	3.8369	0.0072
266	3.8442	0.0072
267	3.8514	0.0072
268	3.8586	0.0072
269	3.8658	0.0072
270	3.8729	0.0072
271	3.8801	0.0072
272	3.8873	0.0072
273	3.8944	0.0071
274	3.9015	0.0071
275	3.9086	0.0071
276	3.9157	0.0071
277	3.9228	0.0071
278	3.9299	0.0071
279	3.9370	0.0071
280	3.9440	0.0070
281	3.9511	0.0070
282	3.9581	0.0070
283	3.9651	0.0070
284	3.9721	0.0070
285	3.9791	0.0070
286	3.9861	0.0070
287	3.9930	0.0070
288	4.0000	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0056	0.0014
2	0.0070	0.0056	0.0014
3	0.0070	0.0056	0.0014
4	0.0070	0.0056	0.0014
5	0.0070	0.0056	0.0014
6	0.0070	0.0056	0.0014

7	0.0071	0.0057	0.0014
8	0.0071	0.0057	0.0014
9	0.0071	0.0057	0.0014
10	0.0071	0.0057	0.0014
11	0.0071	0.0057	0.0014
12	0.0072	0.0057	0.0014
13	0.0072	0.0058	0.0014
14	0.0072	0.0058	0.0014
15	0.0072	0.0058	0.0014
16	0.0072	0.0058	0.0014
17	0.0073	0.0058	0.0014
18	0.0073	0.0058	0.0014
19	0.0073	0.0059	0.0014
20	0.0073	0.0059	0.0014
21	0.0073	0.0059	0.0015
22	0.0074	0.0059	0.0015
23	0.0074	0.0059	0.0015
24	0.0074	0.0059	0.0015
25	0.0074	0.0060	0.0015
26	0.0074	0.0060	0.0015
27	0.0075	0.0060	0.0015
28	0.0075	0.0060	0.0015
29	0.0075	0.0060	0.0015
30	0.0075	0.0060	0.0015
31	0.0076	0.0061	0.0015
32	0.0076	0.0061	0.0015
33	0.0076	0.0061	0.0015
34	0.0076	0.0061	0.0015
35	0.0077	0.0061	0.0015
36	0.0077	0.0062	0.0015
37	0.0077	0.0062	0.0015
38	0.0077	0.0062	0.0015
39	0.0078	0.0062	0.0015
40	0.0078	0.0062	0.0015
41	0.0078	0.0063	0.0015
42	0.0078	0.0063	0.0016
43	0.0079	0.0063	0.0016
44	0.0079	0.0063	0.0016
45	0.0079	0.0064	0.0016
46	0.0079	0.0064	0.0016
47	0.0080	0.0064	0.0016
48	0.0080	0.0064	0.0016
49	0.0080	0.0064	0.0016
50	0.0080	0.0065	0.0016
51	0.0081	0.0065	0.0016
52	0.0081	0.0065	0.0016
53	0.0081	0.0065	0.0016
54	0.0082	0.0065	0.0016
55	0.0082	0.0066	0.0016
56	0.0082	0.0066	0.0016
57	0.0083	0.0066	0.0016
58	0.0083	0.0066	0.0016
59	0.0083	0.0067	0.0016
60	0.0083	0.0067	0.0017
61	0.0084	0.0067	0.0017
62	0.0084	0.0067	0.0017
63	0.0085	0.0068	0.0017
64	0.0085	0.0068	0.0017
65	0.0085	0.0068	0.0017
66	0.0085	0.0068	0.0017
67	0.0086	0.0069	0.0017
68	0.0086	0.0069	0.0017
69	0.0087	0.0069	0.0017
70	0.0087	0.0070	0.0017
71	0.0087	0.0070	0.0017
72	0.0087	0.0070	0.0017
73	0.0088	0.0071	0.0017
74	0.0088	0.0071	0.0017
75	0.0089	0.0071	0.0018
76	0.0089	0.0071	0.0018
77	0.0089	0.0072	0.0018

78	0.0090	0.0072	0.0018
79	0.0090	0.0072	0.0018
80	0.0091	0.0073	0.0018
81	0.0091	0.0073	0.0018
82	0.0091	0.0073	0.0018
83	0.0092	0.0074	0.0018
84	0.0092	0.0074	0.0018
85	0.0093	0.0074	0.0018
86	0.0093	0.0075	0.0018
87	0.0094	0.0075	0.0019
88	0.0094	0.0075	0.0019
89	0.0095	0.0076	0.0019
90	0.0095	0.0076	0.0019
91	0.0095	0.0077	0.0019
92	0.0096	0.0077	0.0019
93	0.0096	0.0077	0.0019
94	0.0097	0.0078	0.0019
95	0.0097	0.0078	0.0019
96	0.0098	0.0078	0.0019
97	0.0098	0.0079	0.0019
98	0.0099	0.0079	0.0020
99	0.0099	0.0080	0.0020
100	0.0100	0.0080	0.0020
101	0.0101	0.0081	0.0020
102	0.0101	0.0081	0.0020
103	0.0102	0.0081	0.0020
104	0.0102	0.0082	0.0020
105	0.0103	0.0082	0.0020
106	0.0103	0.0083	0.0020
107	0.0104	0.0083	0.0021
108	0.0104	0.0084	0.0021
109	0.0105	0.0084	0.0021
110	0.0106	0.0085	0.0021
111	0.0106	0.0085	0.0021
112	0.0107	0.0086	0.0021
113	0.0108	0.0086	0.0021
114	0.0108	0.0087	0.0021
115	0.0109	0.0088	0.0022
116	0.0110	0.0088	0.0022
117	0.0111	0.0089	0.0022
118	0.0111	0.0089	0.0022
119	0.0112	0.0090	0.0022
120	0.0113	0.0090	0.0022
121	0.0114	0.0091	0.0023
122	0.0114	0.0092	0.0023
123	0.0115	0.0092	0.0023
124	0.0116	0.0093	0.0023
125	0.0117	0.0094	0.0023
126	0.0118	0.0094	0.0023
127	0.0119	0.0095	0.0024
128	0.0119	0.0096	0.0024
129	0.0121	0.0097	0.0024
130	0.0121	0.0097	0.0024
131	0.0123	0.0098	0.0024
132	0.0123	0.0099	0.0024
133	0.0125	0.0100	0.0025
134	0.0125	0.0100	0.0025
135	0.0127	0.0102	0.0025
136	0.0127	0.0102	0.0025
137	0.0129	0.0103	0.0026
138	0.0130	0.0104	0.0026
139	0.0131	0.0105	0.0026
140	0.0132	0.0106	0.0026
141	0.0134	0.0107	0.0027
142	0.0135	0.0108	0.0027
143	0.0137	0.0110	0.0027
144	0.0137	0.0110	0.0027
145	0.0175	0.0140	0.0035
146	0.0175	0.0141	0.0035
147	0.0177	0.0142	0.0035
148	0.0178	0.0143	0.0035

149	0.0180	0.0145	0.0036
150	0.0181	0.0145	0.0036
151	0.0184	0.0147	0.0036
152	0.0185	0.0148	0.0037
153	0.0187	0.0150	0.0037
154	0.0188	0.0151	0.0037
155	0.0191	0.0153	0.0038
156	0.0192	0.0154	0.0038
157	0.0195	0.0156	0.0039
158	0.0196	0.0157	0.0039
159	0.0199	0.0159	0.0039
160	0.0200	0.0161	0.0040
161	0.0203	0.0163	0.0040
162	0.0205	0.0164	0.0041
163	0.0208	0.0167	0.0041
164	0.0210	0.0169	0.0042
165	0.0214	0.0172	0.0042
166	0.0216	0.0173	0.0043
167	0.0220	0.0176	0.0044
168	0.0222	0.0178	0.0044
169	0.0227	0.0182	0.0045
170	0.0229	0.0184	0.0045
171	0.0234	0.0188	0.0046
172	0.0237	0.0190	0.0047
173	0.0243	0.0195	0.0048
174	0.0246	0.0197	0.0049
175	0.0253	0.0203	0.0050
176	0.0257	0.0206	0.0051
177	0.0265	0.0212	0.0052
178	0.0269	0.0216	0.0053
179	0.0278	0.0223	0.0055
180	0.0284	0.0227	0.0056
181	0.0295	0.0237	0.0058
182	0.0302	0.0242	0.0060
183	0.0317	0.0254	0.0063
184	0.0325	0.0261	0.0064
185	0.0168	0.0134	0.0033
186	0.0179	0.0143	0.0035
187	0.0207	0.0166	0.0041
188	0.0226	0.0181	0.0045
189	0.0281	0.0225	0.0056
190	0.0324	0.0260	0.0064
191	0.0491	0.0394	0.0097
192	0.0713	0.0559	0.0154
193	0.3086	0.0559	0.2526
194	0.0387	0.0310	0.0077
195	0.0250	0.0201	0.0050
196	0.0192	0.0154	0.0038
197	0.0335	0.0268	0.0066
198	0.0309	0.0248	0.0061
199	0.0289	0.0232	0.0057
200	0.0273	0.0219	0.0054
201	0.0260	0.0209	0.0052
202	0.0249	0.0200	0.0049
203	0.0240	0.0192	0.0048
204	0.0232	0.0186	0.0046
205	0.0224	0.0180	0.0044
206	0.0218	0.0175	0.0043
207	0.0212	0.0170	0.0042
208	0.0207	0.0166	0.0041
209	0.0202	0.0162	0.0040
210	0.0197	0.0158	0.0039
211	0.0193	0.0155	0.0038
212	0.0189	0.0152	0.0037
213	0.0186	0.0149	0.0037
214	0.0182	0.0146	0.0036
215	0.0179	0.0144	0.0036
216	0.0176	0.0141	0.0035
217	0.0138	0.0111	0.0027
218	0.0136	0.0109	0.0027
219	0.0133	0.0107	0.0026

220	0.0131	0.0105	0.0026
221	0.0128	0.0103	0.0025
222	0.0126	0.0101	0.0025
223	0.0124	0.0099	0.0025
224	0.0122	0.0098	0.0024
225	0.0120	0.0096	0.0024
226	0.0118	0.0095	0.0023
227	0.0116	0.0093	0.0023
228	0.0115	0.0092	0.0023
229	0.0113	0.0091	0.0022
230	0.0112	0.0090	0.0022
231	0.0110	0.0088	0.0022
232	0.0109	0.0087	0.0022
233	0.0107	0.0086	0.0021
234	0.0106	0.0085	0.0021
235	0.0105	0.0084	0.0021
236	0.0104	0.0083	0.0021
237	0.0102	0.0082	0.0020
238	0.0101	0.0081	0.0020
239	0.0100	0.0080	0.0020
240	0.0099	0.0079	0.0020
241	0.0098	0.0079	0.0019
242	0.0097	0.0078	0.0019
243	0.0096	0.0077	0.0019
244	0.0095	0.0076	0.0019
245	0.0094	0.0076	0.0019
246	0.0093	0.0075	0.0018
247	0.0092	0.0074	0.0018
248	0.0092	0.0073	0.0018
249	0.0091	0.0073	0.0018
250	0.0090	0.0072	0.0018
251	0.0089	0.0072	0.0018
252	0.0088	0.0071	0.0018
253	0.0088	0.0070	0.0017
254	0.0087	0.0070	0.0017
255	0.0086	0.0069	0.0017
256	0.0086	0.0069	0.0017
257	0.0085	0.0068	0.0017
258	0.0084	0.0068	0.0017
259	0.0084	0.0067	0.0017
260	0.0083	0.0067	0.0016
261	0.0082	0.0066	0.0016
262	0.0082	0.0066	0.0016
263	0.0081	0.0065	0.0016
264	0.0081	0.0065	0.0016
265	0.0080	0.0064	0.0016
266	0.0080	0.0064	0.0016
267	0.0079	0.0063	0.0016
268	0.0078	0.0063	0.0016
269	0.0078	0.0063	0.0015
270	0.0077	0.0062	0.0015
271	0.0077	0.0062	0.0015
272	0.0076	0.0061	0.0015
273	0.0076	0.0061	0.0015
274	0.0076	0.0061	0.0015
275	0.0075	0.0060	0.0015
276	0.0075	0.0060	0.0015
277	0.0074	0.0059	0.0015
278	0.0074	0.0059	0.0015
279	0.0073	0.0059	0.0015
280	0.0073	0.0058	0.0014
281	0.0072	0.0058	0.0014
282	0.0072	0.0058	0.0014
283	0.0072	0.0057	0.0014
284	0.0071	0.0057	0.0014
285	0.0071	0.0057	0.0014
286	0.0070	0.0057	0.0014
287	0.0070	0.0056	0.0014
288	0.0070	0.0056	0.0014

```
      Total soil rain loss =      3.02(In)
      Total effective rainfall =      0.98(In)
      Peak flow rate in flood hydrograph =      7.97(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0004      0.05  Q          |         |         |         |
  0+15       0.0009      0.08  Q          |         |         |         |
  0+20       0.0016      0.10  Q          |         |         |         |
  0+25       0.0023      0.10  Q          |         |         |         |
  0+30       0.0031      0.11  Q          |         |         |         |
  0+35       0.0038      0.11  Q          |         |         |         |
  0+40       0.0046      0.11  Q          |         |         |         |
  0+45       0.0054      0.11  Q          |         |         |         |
  0+50       0.0062      0.11  Q          |         |         |         |
  0+55       0.0069      0.11  Q          |         |         |         |
  1+ 0       0.0077      0.11  Q          |         |         |         |
  1+ 5       0.0085      0.11  Q          |         |         |         |
  1+10       0.0093      0.11  Q          |         |         |         |
  1+15       0.0101      0.12  Q          |         |         |         |
  1+20       0.0109      0.12  Q          |         |         |         |
  1+25       0.0117      0.12  Q          |         |         |         |
  1+30       0.0125      0.12  Q          |         |         |         |
  1+35       0.0133      0.12  Q          |         |         |         |
  1+40       0.0141      0.12  QV         |         |         |         |
  1+45       0.0149      0.12  QV         |         |         |         |
  1+50       0.0157      0.12  QV         |         |         |         |
  1+55       0.0165      0.12  QV         |         |         |         |
  2+ 0       0.0174      0.12  QV         |         |         |         |
  2+ 5       0.0182      0.12  QV         |         |         |         |
  2+10       0.0190      0.12  QV         |         |         |         |
  2+15       0.0198      0.12  QV         |         |         |         |
  2+20       0.0206      0.12  QV         |         |         |         |
  2+25       0.0215      0.12  QV         |         |         |         |
  2+30       0.0223      0.12  QV         |         |         |         |
  2+35       0.0231      0.12  QV         |         |         |         |
  2+40       0.0240      0.12  QV         |         |         |         |
  2+45       0.0248      0.12  QV         |         |         |         |
  2+50       0.0256      0.12  QV         |         |         |         |
  2+55       0.0265      0.12  QV         |         |         |         |
  3+ 0       0.0273      0.12  QV         |         |         |         |
  3+ 5       0.0282      0.12  Q V        |         |         |         |
  3+10       0.0290      0.12  Q V        |         |         |         |
  3+15       0.0299      0.12  Q V        |         |         |         |
  3+20       0.0307      0.12  Q V        |         |         |         |
  3+25       0.0316      0.12  Q V        |         |         |         |
  3+30       0.0324      0.13  Q V        |         |         |         |
  3+35       0.0333      0.13  Q V        |         |         |         |
  3+40       0.0342      0.13  Q V        |         |         |         |
  3+45       0.0350      0.13  Q V        |         |         |         |
  3+50       0.0359      0.13  Q V        |         |         |         |
  3+55       0.0368      0.13  Q V        |         |         |         |
  4+ 0       0.0377      0.13  Q V        |         |         |         |
  4+ 5       0.0386      0.13  Q V        |         |         |         |
  4+10       0.0394      0.13  Q V        |         |         |         |
  4+15       0.0403      0.13  Q V        |         |         |         |
  4+20       0.0412      0.13  Q V        |         |         |         |
  4+25       0.0421      0.13  Q  V       |         |         |         |
  4+30       0.0430      0.13  Q  V       |         |         |         |
  4+35       0.0439      0.13  Q  V       |         |         |         |
  4+40       0.0448      0.13  Q  V       |         |         |         |
  4+45       0.0457      0.13  Q  V       |         |         |         |
  4+50       0.0466      0.13  Q  V       |         |         |         |
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4+55	0.0475	0.13	Q	V				
5+ 0	0.0485	0.13	Q	V				
5+ 5	0.0494	0.13	Q	V				
5+10	0.0503	0.13	Q	V				
5+15	0.0512	0.13	Q	V				
5+20	0.0522	0.14	Q	V				
5+25	0.0531	0.14	Q	V				
5+30	0.0540	0.14	Q	V				
5+35	0.0550	0.14	Q	V				
5+40	0.0559	0.14	Q	V				
5+45	0.0569	0.14	Q	V				
5+50	0.0578	0.14	Q	V				
5+55	0.0588	0.14	Q	V				
6+ 0	0.0597	0.14	Q	V				
6+ 5	0.0607	0.14	Q	V				
6+10	0.0617	0.14	Q	V				
6+15	0.0626	0.14	Q	V				
6+20	0.0636	0.14	Q	V				
6+25	0.0646	0.14	Q	V				
6+30	0.0656	0.14	Q	V				
6+35	0.0666	0.14	Q	V				
6+40	0.0676	0.14	Q	V				
6+45	0.0686	0.14	Q	V				
6+50	0.0696	0.15	Q	V				
6+55	0.0706	0.15	Q	V				
7+ 0	0.0716	0.15	Q	V				
7+ 5	0.0726	0.15	Q	V				
7+10	0.0736	0.15	Q	V				
7+15	0.0747	0.15	Q	V				
7+20	0.0757	0.15	Q	V				
7+25	0.0767	0.15	Q	V				
7+30	0.0778	0.15	Q	V				
7+35	0.0788	0.15	Q	V				
7+40	0.0799	0.15	Q	V				
7+45	0.0809	0.15	Q	V				
7+50	0.0820	0.15	Q	V				
7+55	0.0830	0.15	Q	V				
8+ 0	0.0841	0.16	Q	V				
8+ 5	0.0852	0.16	Q	V				
8+10	0.0863	0.16	Q	V				
8+15	0.0874	0.16	Q	V				
8+20	0.0884	0.16	Q	V				
8+25	0.0895	0.16	Q	V				
8+30	0.0906	0.16	Q	V				
8+35	0.0918	0.16	Q	V				
8+40	0.0929	0.16	Q	V				
8+45	0.0940	0.16	Q	V				
8+50	0.0951	0.16	Q	V				
8+55	0.0963	0.16	Q	V				
9+ 0	0.0974	0.17	Q	V				
9+ 5	0.0986	0.17	Q	V				
9+10	0.0997	0.17	Q	V				
9+15	0.1009	0.17	Q	V				
9+20	0.1020	0.17	Q	V				
9+25	0.1032	0.17	Q	V				
9+30	0.1044	0.17	Q	V				
9+35	0.1056	0.17	Q	V				
9+40	0.1068	0.17	Q	V				
9+45	0.1080	0.18	Q	V				
9+50	0.1092	0.18	Q	V				
9+55	0.1104	0.18	Q	V				
10+ 0	0.1117	0.18	Q	V				
10+ 5	0.1129	0.18	Q	V				
10+10	0.1142	0.18	Q	V				
10+15	0.1154	0.18	Q	V				
10+20	0.1167	0.18	Q	V				
10+25	0.1180	0.18	Q	V				
10+30	0.1192	0.19	Q	V				
10+35	0.1205	0.19	Q	V				
10+40	0.1218	0.19	Q	V				
10+45	0.1231	0.19	Q	V				

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10+50       0.1245      0.19  Q        V|         |          |         |
10+55       0.1258      0.19  Q        V|         |          |         |
11+ 0       0.1271      0.20  Q        V|         |          |         |
11+ 5       0.1285      0.20  Q        V|         |          |         |
11+10       0.1299      0.20  Q        V|         |          |         |
11+15       0.1312      0.20  Q        V|         |          |         |
11+20       0.1326      0.20  Q        V|         |          |         |
11+25       0.1340      0.20  Q        V|         |          |         |
11+30       0.1354      0.21  Q        V|         |          |         |
11+35       0.1369      0.21  Q        V|         |          |         |
11+40       0.1383      0.21  Q         V         |          |         |
11+45       0.1397      0.21  Q         V         |          |         |
11+50       0.1412      0.21  Q         V         |          |         |
11+55       0.1427      0.21  Q         V         |          |         |
12+ 0       0.1442      0.22  Q         V         |          |         |
12+ 5       0.1457      0.22  Q         V         |          |         |
12+10       0.1474      0.25  Q         V         |          |         |
12+15       0.1492      0.27  |Q        V         |          |         |
12+20       0.1511      0.27  |Q        V         |          |         |
12+25       0.1530      0.28  |Q         |V        |          |         |
12+30       0.1550      0.28  |Q         |V        |          |         |
12+35       0.1570      0.29  |Q         |V        |          |         |
12+40       0.1590      0.29  |Q         |V        |          |         |
12+45       0.1610      0.29  |Q         |V        |          |         |
12+50       0.1631      0.30  |Q         |V        |          |         |
12+55       0.1651      0.30  |Q         | V       |          |         |
13+ 0       0.1672      0.30  |Q         | V       |          |         |
13+ 5       0.1693      0.31  |Q         | V       |          |         |
13+10       0.1715      0.31  |Q         | V       |          |         |
13+15       0.1736      0.31  |Q         | V       |          |         |
13+20       0.1758      0.32  |Q         | V       |          |         |
13+25       0.1780      0.32  |Q         | V       |          |         |
13+30       0.1802      0.32  |Q         |  V      |          |         |
13+35       0.1824      0.33  |Q         |  V      |          |         |
13+40       0.1847      0.33  |Q         |  V      |          |         |
13+45       0.1870      0.33  |Q         |  V      |          |         |
13+50       0.1893      0.34  |Q         |  V      |          |         |
13+55       0.1917      0.34  |Q         |  V      |          |         |
14+ 0       0.1941      0.35  |Q         |   V     |          |         |
14+ 5       0.1965      0.35  |Q         |   V     |          |         |
14+10       0.1990      0.36  |Q         |   V     |          |         |
14+15       0.2015      0.36  |Q         |   V     |          |         |
14+20       0.2040      0.37  |Q         |   V     |          |         |
14+25       0.2066      0.38  |Q         |    V    |          |         |
14+30       0.2092      0.38  |Q         |    V    |          |         |
14+35       0.2119      0.39  |Q         |    V    |          |         |
14+40       0.2147      0.40  |Q         |    V    |          |         |
14+45       0.2175      0.41  |Q         |    V    |          |         |
14+50       0.2203      0.41  |Q         |     V   |          |         |
14+55       0.2232      0.42  |Q         |     V   |          |         |
15+ 0       0.2262      0.43  |Q         |     V   |          |         |
15+ 5       0.2293      0.45  |Q         |     V   |          |         |
15+10       0.2324      0.46  |Q         |     V   |          |         |
15+15       0.2357      0.47  |Q         |      V  |          |         |
15+20       0.2391      0.49  |Q         |      V  |          |         |
15+25       0.2424      0.49  |Q         |      V  |          |         |
15+30       0.2452      0.41  |Q         |      V  |          |         |
15+35       0.2476      0.34  |Q         |      V  |          |         |
15+40       0.2499      0.34  |Q         |       V |          |         |
15+45       0.2523      0.35  |Q         |       V |          |         |
15+50       0.2551      0.40  |Q         |       V |          |         |
15+55       0.2583      0.47  |Q         |       V |          |         |
16+ 0       0.2627      0.63  | Q       |         V|          |         |
16+ 5       0.2771      2.10  |       Q |          V          |         |
16+10       0.3320      7.97  |         |          |   V      |Q        |
16+15       0.3803      7.01  |         |          |      VQ  |         |
16+20       0.4002      2.90  |         |Q         |        V|         |
16+25       0.4125      1.78  |      Q  |          |        V|         |
16+30       0.4210      1.23  |   Q     |          |         V         |
16+35       0.4268      0.85  |  Q      |          |          |V        |
16+40       0.4311      0.62  | Q       |          |          |V        |
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16+45       0.4350      0.55  | Q       |         |         |V        |
16+50       0.4386      0.53  | Q       |         |         |V        |
16+55       0.4419      0.48  |Q        |         |         | V       |
17+ 0       0.4446      0.40  |Q        |         |         | V       |
17+ 5       0.4473      0.39  |Q        |         |         | V       |
17+10       0.4499      0.37  |Q        |         |         | V       |
17+15       0.4524      0.36  |Q        |         |         | V       |
17+20       0.4548      0.35  |Q        |         |         |  V      |
17+25       0.4572      0.34  |Q        |         |         |  V      |
17+30       0.4595      0.33  |Q        |         |         |  V      |
17+35       0.4617      0.33  |Q        |         |         |  V      |
17+40       0.4639      0.32  |Q        |         |         |  V      |
17+45       0.4661      0.31  |Q        |         |         |  V      |
17+50       0.4682      0.31  |Q        |         |         |   V     |
17+55       0.4702      0.30  |Q        |         |         |   V     |
18+ 0       0.4723      0.29  |Q        |         |         |   V     |
18+ 5       0.4742      0.29  |Q        |         |         |   V     |
18+10       0.4760      0.26  |Q        |         |         |   V     |
18+15       0.4777      0.24  Q         |         |         |   V     |
18+20       0.4792      0.23  Q         |         |         |   V     |
18+25       0.4807      0.22  Q         |         |         |   V     |
18+30       0.4822      0.21  Q         |         |         |    V    |
18+35       0.4836      0.21  Q         |         |         |    V    |
18+40       0.4850      0.20  Q         |         |         |    V    |
18+45       0.4864      0.20  Q         |         |         |    V    |
18+50       0.4877      0.20  Q         |         |         |    V    |
18+55       0.4891      0.19  Q         |         |         |    V    |
19+ 0       0.4904      0.19  Q         |         |         |    V    |
19+ 5       0.4917      0.19  Q         |         |         |    V    |
19+10       0.4929      0.18  Q         |         |         |    V    |
19+15       0.4942      0.18  Q         |         |         |    V    |
19+20       0.4954      0.18  Q         |         |         |     V   |
19+25       0.4967      0.18  Q         |         |         |     V   |
19+30       0.4979      0.17  Q         |         |         |     V   |
19+35       0.4991      0.17  Q         |         |         |     V   |
19+40       0.5002      0.17  Q         |         |         |     V   |
19+45       0.5014      0.17  Q         |         |         |     V   |
19+50       0.5025      0.17  Q         |         |         |     V   |
19+55       0.5037      0.16  Q         |         |         |     V   |
20+ 0       0.5048      0.16  Q         |         |         |     V   |
20+ 5       0.5059      0.16  Q         |         |         |     V   |
20+10       0.5070      0.16  Q         |         |         |     V   |
20+15       0.5081      0.16  Q         |         |         |     V   |
20+20       0.5092      0.16  Q         |         |         |      V  |
20+25       0.5102      0.15  Q         |         |         |      V  |
20+30       0.5113      0.15  Q         |         |         |      V  |
20+35       0.5123      0.15  Q         |         |         |      V  |
20+40       0.5134      0.15  Q         |         |         |      V  |
20+45       0.5144      0.15  Q         |         |         |      V  |
20+50       0.5154      0.15  Q         |         |         |      V  |
20+55       0.5164      0.15  Q         |         |         |      V  |
21+ 0       0.5174      0.14  Q         |         |         |      V  |
21+ 5       0.5184      0.14  Q         |         |         |      V  |
21+10       0.5194      0.14  Q         |         |         |      V  |
21+15       0.5203      0.14  Q         |         |         |      V  |
21+20       0.5213      0.14  Q         |         |         |      V  |
21+25       0.5223      0.14  Q         |         |         |      V  |
21+30       0.5232      0.14  Q         |         |         |       V |
21+35       0.5241      0.14  Q         |         |         |       V |
21+40       0.5251      0.14  Q         |         |         |       V |
21+45       0.5260      0.13  Q         |         |         |       V |
21+50       0.5269      0.13  Q         |         |         |       V |
21+55       0.5278      0.13  Q         |         |         |       V |
22+ 0       0.5287      0.13  Q         |         |         |       V |
22+ 5       0.5296      0.13  Q         |         |         |       V |
22+10       0.5305      0.13  Q         |         |         |       V |
22+15       0.5314      0.13  Q         |         |         |       V |
22+20       0.5323      0.13  Q         |         |         |       V |
22+25       0.5332      0.13  Q         |         |         |       V |
22+30       0.5340      0.13  Q         |         |         |       V |
22+35       0.5349      0.13  Q         |         |         |       V |
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   22+40       0.5358      0.12  Q          |          |          |       V |
   22+45       0.5366      0.12  Q          |          |          |       V |
   22+50       0.5375      0.12  Q          |          |          |        V|
   22+55       0.5383      0.12  Q          |          |          |        V|
   23+ 0       0.5391      0.12  Q          |          |          |        V|
   23+ 5       0.5400      0.12  Q          |          |          |        V|
   23+10       0.5408      0.12  Q          |          |          |        V|
   23+15       0.5416      0.12  Q          |          |          |        V|
   23+20       0.5424      0.12  Q          |          |          |        V|
   23+25       0.5433      0.12  Q          |          |          |        V|
   23+30       0.5441      0.12  Q          |          |          |        V|
   23+35       0.5449      0.12  Q          |          |          |        V|
   23+40       0.5457      0.12  Q          |          |          |        V|
   23+45       0.5465      0.12  Q          |          |          |        V|
   23+50       0.5472      0.11  Q          |          |          |        V|
   23+55       0.5480      0.11  Q          |          |          |        V|
   24+ 0       0.5488      0.11  Q          |          |          |        V|
   24+ 5       0.5495      0.11  Q          |          |          |        V|
   24+10       0.5500      0.07  Q          |          |          |        V|
   24+15       0.5502      0.03  Q          |          |          |        V|
   24+20       0.5503      0.02  Q          |          |          |        V|
   24+25       0.5504      0.01  Q          |          |          |        V|
   24+30       0.5504      0.00  Q          |          |          |        V|
   24+35       0.5504      0.00  Q          |          |          |        V|
   24+40       0.5504      0.00  Q          |          |          |        V|
   24+45       0.5504      0.00  Q          |          |          |        V|
   24+50       0.5504      0.00  Q          |          |          |         V
-------------------------------------------------------------------------
```

Area 'F' – 5 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'F'
5 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.71           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.71           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.71          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.71           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.71           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.71          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      60.6          6.71      1.000     0.671    1.000    0.671

Area-averaged adjusted loss rate Fm (In/Hr) =  0.671

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
6.71	1.000	78.0	60.6	6.50	0.322

Area-averaged catchment yield fraction, Y = 0.322
Area-averaged low loss fraction, Yb = 0.678
User entry of time of concentration = 0.162 (hours)
++
Watershed area = 6.71(Ac.)
Catchment Lag time = 0.130 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 64.3004
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.671(In/Hr)
Average low loss rate fraction (Yb) = 0.678 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 6.71(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.403(In)
30-minute factor = 1.000 Adjusted rainfall = 0.690(In)
1-hour factor = 1.000 Adjusted rainfall = 0.849(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.586(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 81.15 (CFS))	
1	6.228	5.054
2	42.193	29.185
3	74.058	25.858
4	85.789	9.519
5	92.451	5.407
6	96.283	3.110
7	98.090	1.467
8	98.816	0.589
9	99.292	0.386
10	99.729	0.355
11	100.000	0.220

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4030	0.4030
2	0.4961	0.0931
3	0.5603	0.0642
4	0.6108	0.0505
5	0.6531	0.0423
6	0.6898	0.0367
7	0.7224	0.0326
8	0.7520	0.0295
9	0.7790	0.0270
10	0.8040	0.0250
11	0.8273	0.0233
12	0.8492	0.0219
13	0.8925	0.0433
14	0.9346	0.0421
15	0.9755	0.0409

16	1.0155	0.0399
17	1.0545	0.0390
18	1.0926	0.0381
19	1.1299	0.0373
20	1.1665	0.0366
21	1.2024	0.0359
22	1.2377	0.0353
23	1.2724	0.0347
24	1.3065	0.0341
25	1.3400	0.0336
26	1.3731	0.0331
27	1.4057	0.0326
28	1.4378	0.0321
29	1.4695	0.0317
30	1.5008	0.0313
31	1.5317	0.0309
32	1.5622	0.0305
33	1.5924	0.0302
34	1.6222	0.0298
35	1.6517	0.0295
36	1.6809	0.0292
37	1.7097	0.0289
38	1.7383	0.0286
39	1.7666	0.0283
40	1.7946	0.0280
41	1.8223	0.0277
42	1.8498	0.0275
43	1.8770	0.0272
44	1.9040	0.0270
45	1.9308	0.0268
46	1.9573	0.0265
47	1.9837	0.0263
48	2.0098	0.0261
49	2.0357	0.0259
50	2.0614	0.0257
51	2.0869	0.0255
52	2.1123	0.0253
53	2.1374	0.0251
54	2.1624	0.0250
55	2.1872	0.0248
56	2.2118	0.0246
57	2.2362	0.0245
58	2.2605	0.0243
59	2.2847	0.0241
60	2.3086	0.0240
61	2.3325	0.0238
62	2.3561	0.0237
63	2.3797	0.0235
64	2.4031	0.0234
65	2.4263	0.0233
66	2.4495	0.0231
67	2.4724	0.0230
68	2.4953	0.0229
69	2.5180	0.0227
70	2.5407	0.0226
71	2.5631	0.0225
72	2.5855	0.0224
73	2.6067	0.0212
74	2.6278	0.0211
75	2.6487	0.0210
76	2.6696	0.0208
77	2.6903	0.0207
78	2.7110	0.0206
79	2.7315	0.0205
80	2.7519	0.0204
81	2.7722	0.0203
82	2.7924	0.0202
83	2.8125	0.0201
84	2.8325	0.0200
85	2.8524	0.0199
86	2.8722	0.0198

87	2.8920	0.0197
88	2.9116	0.0196
89	2.9311	0.0195
90	2.9506	0.0194
91	2.9699	0.0194
92	2.9892	0.0193
93	3.0084	0.0192
94	3.0275	0.0191
95	3.0465	0.0190
96	3.0655	0.0189
97	3.0843	0.0189
98	3.1031	0.0188
99	3.1218	0.0187
100	3.1405	0.0186
101	3.1590	0.0186
102	3.1775	0.0185
103	3.1959	0.0184
104	3.2142	0.0183
105	3.2325	0.0183
106	3.2507	0.0182
107	3.2688	0.0181
108	3.2868	0.0180
109	3.3048	0.0180
110	3.3227	0.0179
111	3.3406	0.0178
112	3.3583	0.0178
113	3.3761	0.0177
114	3.3937	0.0177
115	3.4113	0.0176
116	3.4288	0.0175
117	3.4463	0.0175
118	3.4637	0.0174
119	3.4811	0.0173
120	3.4983	0.0173
121	3.5156	0.0172
122	3.5327	0.0172
123	3.5498	0.0171
124	3.5669	0.0171
125	3.5839	0.0170
126	3.6008	0.0169
127	3.6177	0.0169
128	3.6346	0.0168
129	3.6513	0.0168
130	3.6681	0.0167
131	3.6847	0.0167
132	3.7014	0.0166
133	3.7179	0.0166
134	3.7345	0.0165
135	3.7509	0.0165
136	3.7674	0.0164
137	3.7837	0.0164
138	3.8001	0.0163
139	3.8163	0.0163
140	3.8326	0.0162
141	3.8487	0.0162
142	3.8649	0.0161
143	3.8810	0.0161
144	3.8970	0.0160
145	3.9130	0.0160
146	3.9289	0.0160
147	3.9449	0.0159
148	3.9607	0.0159
149	3.9765	0.0158
150	3.9923	0.0158
151	4.0080	0.0157
152	4.0237	0.0157
153	4.0394	0.0156
154	4.0550	0.0156
155	4.0706	0.0156
156	4.0861	0.0155
157	4.1016	0.0155

158	4.1170	0.0154
159	4.1324	0.0154
160	4.1478	0.0154
161	4.1631	0.0153
162	4.1784	0.0153
163	4.1936	0.0152
164	4.2088	0.0152
165	4.2240	0.0152
166	4.2391	0.0151
167	4.2542	0.0151
168	4.2693	0.0151
169	4.2843	0.0150
170	4.2993	0.0150
171	4.3143	0.0150
172	4.3292	0.0149
173	4.3441	0.0149
174	4.3589	0.0148
175	4.3737	0.0148
176	4.3885	0.0148
177	4.4032	0.0147
178	4.4179	0.0147
179	4.4326	0.0147
180	4.4473	0.0146
181	4.4619	0.0146
182	4.4764	0.0146
183	4.4910	0.0145
184	4.5055	0.0145
185	4.5200	0.0145
186	4.5344	0.0144
187	4.5488	0.0144
188	4.5632	0.0144
189	4.5776	0.0144
190	4.5919	0.0143
191	4.6062	0.0143
192	4.6204	0.0143
193	4.6347	0.0142
194	4.6489	0.0142
195	4.6630	0.0142
196	4.6772	0.0141
197	4.6913	0.0141
198	4.7054	0.0141
199	4.7194	0.0141
200	4.7334	0.0140
201	4.7474	0.0140
202	4.7614	0.0140
203	4.7753	0.0139
204	4.7893	0.0139
205	4.8031	0.0139
206	4.8170	0.0139
207	4.8308	0.0138
208	4.8446	0.0138
209	4.8584	0.0138
210	4.8721	0.0137
211	4.8859	0.0137
212	4.8996	0.0137
213	4.9132	0.0137
214	4.9269	0.0136
215	4.9405	0.0136
216	4.9541	0.0136
217	4.9676	0.0136
218	4.9812	0.0135
219	4.9947	0.0135
220	5.0082	0.0135
221	5.0216	0.0135
222	5.0351	0.0134
223	5.0485	0.0134
224	5.0619	0.0134
225	5.0752	0.0134
226	5.0886	0.0133
227	5.1019	0.0133
228	5.1152	0.0133

229	5.1284	0.0133
230	5.1417	0.0132
231	5.1549	0.0132
232	5.1681	0.0132
233	5.1813	0.0132
234	5.1944	0.0132
235	5.2076	0.0131
236	5.2207	0.0131
237	5.2337	0.0131
238	5.2468	0.0131
239	5.2598	0.0130
240	5.2729	0.0130
241	5.2859	0.0130
242	5.2988	0.0130
243	5.3118	0.0129
244	5.3247	0.0129
245	5.3376	0.0129
246	5.3505	0.0129
247	5.3634	0.0129
248	5.3762	0.0128
249	5.3890	0.0128
250	5.4018	0.0128
251	5.4146	0.0128
252	5.4274	0.0128
253	5.4401	0.0127
254	5.4528	0.0127
255	5.4655	0.0127
256	5.4782	0.0127
257	5.4908	0.0127
258	5.5035	0.0126
259	5.5161	0.0126
260	5.5287	0.0126
261	5.5413	0.0126
262	5.5538	0.0126
263	5.5664	0.0125
264	5.5789	0.0125
265	5.5914	0.0125
266	5.6039	0.0125
267	5.6163	0.0125
268	5.6288	0.0124
269	5.6412	0.0124
270	5.6536	0.0124
271	5.6660	0.0124
272	5.6783	0.0124
273	5.6907	0.0123
274	5.7030	0.0123
275	5.7153	0.0123
276	5.7276	0.0123
277	5.7399	0.0123
278	5.7522	0.0123
279	5.7644	0.0122
280	5.7766	0.0122
281	5.7888	0.0122
282	5.8010	0.0122
283	5.8132	0.0122
284	5.8253	0.0121
285	5.8375	0.0121
286	5.8496	0.0121
287	5.8617	0.0121
288	5.8737	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0082	0.0039
2	0.0121	0.0082	0.0039
3	0.0121	0.0082	0.0039
4	0.0121	0.0082	0.0039
5	0.0122	0.0083	0.0039
6	0.0122	0.0083	0.0039

7	0.0122	0.0083	0.0039
8	0.0123	0.0083	0.0039
9	0.0123	0.0083	0.0040
10	0.0123	0.0084	0.0040
11	0.0123	0.0084	0.0040
12	0.0124	0.0084	0.0040
13	0.0124	0.0084	0.0040
14	0.0124	0.0084	0.0040
15	0.0125	0.0085	0.0040
16	0.0125	0.0085	0.0040
17	0.0125	0.0085	0.0040
18	0.0125	0.0085	0.0040
19	0.0126	0.0085	0.0040
20	0.0126	0.0085	0.0041
21	0.0126	0.0086	0.0041
22	0.0127	0.0086	0.0041
23	0.0127	0.0086	0.0041
24	0.0127	0.0086	0.0041
25	0.0128	0.0087	0.0041
26	0.0128	0.0087	0.0041
27	0.0128	0.0087	0.0041
28	0.0128	0.0087	0.0041
29	0.0129	0.0087	0.0041
30	0.0129	0.0088	0.0041
31	0.0129	0.0088	0.0042
32	0.0130	0.0088	0.0042
33	0.0130	0.0088	0.0042
34	0.0130	0.0088	0.0042
35	0.0131	0.0089	0.0042
36	0.0131	0.0089	0.0042
37	0.0132	0.0089	0.0042
38	0.0132	0.0089	0.0042
39	0.0132	0.0090	0.0043
40	0.0132	0.0090	0.0043
41	0.0133	0.0090	0.0043
42	0.0133	0.0090	0.0043
43	0.0134	0.0091	0.0043
44	0.0134	0.0091	0.0043
45	0.0134	0.0091	0.0043
46	0.0135	0.0091	0.0043
47	0.0135	0.0092	0.0043
48	0.0135	0.0092	0.0044
49	0.0136	0.0092	0.0044
50	0.0136	0.0092	0.0044
51	0.0137	0.0093	0.0044
52	0.0137	0.0093	0.0044
53	0.0137	0.0093	0.0044
54	0.0138	0.0093	0.0044
55	0.0138	0.0094	0.0044
56	0.0139	0.0094	0.0045
57	0.0139	0.0094	0.0045
58	0.0139	0.0095	0.0045
59	0.0140	0.0095	0.0045
60	0.0140	0.0095	0.0045
61	0.0141	0.0096	0.0045
62	0.0141	0.0096	0.0045
63	0.0142	0.0096	0.0046
64	0.0142	0.0096	0.0046
65	0.0143	0.0097	0.0046
66	0.0143	0.0097	0.0046
67	0.0144	0.0097	0.0046
68	0.0144	0.0098	0.0046
69	0.0144	0.0098	0.0046
70	0.0145	0.0098	0.0047
71	0.0145	0.0099	0.0047
72	0.0146	0.0099	0.0047
73	0.0146	0.0099	0.0047
74	0.0147	0.0100	0.0047
75	0.0147	0.0100	0.0047
76	0.0148	0.0100	0.0048
77	0.0148	0.0101	0.0048

78	0.0149	0.0101	0.0048
79	0.0150	0.0101	0.0048
80	0.0150	0.0102	0.0048
81	0.0151	0.0102	0.0048
82	0.0151	0.0102	0.0049
83	0.0152	0.0103	0.0049
84	0.0152	0.0103	0.0049
85	0.0153	0.0104	0.0049
86	0.0153	0.0104	0.0049
87	0.0154	0.0105	0.0050
88	0.0154	0.0105	0.0050
89	0.0155	0.0105	0.0050
90	0.0156	0.0106	0.0050
91	0.0156	0.0106	0.0050
92	0.0157	0.0106	0.0050
93	0.0158	0.0107	0.0051
94	0.0158	0.0107	0.0051
95	0.0159	0.0108	0.0051
96	0.0160	0.0108	0.0051
97	0.0160	0.0109	0.0052
98	0.0161	0.0109	0.0052
99	0.0162	0.0110	0.0052
100	0.0162	0.0110	0.0052
101	0.0163	0.0111	0.0052
102	0.0164	0.0111	0.0053
103	0.0165	0.0112	0.0053
104	0.0165	0.0112	0.0053
105	0.0166	0.0113	0.0053
106	0.0167	0.0113	0.0054
107	0.0168	0.0114	0.0054
108	0.0168	0.0114	0.0054
109	0.0169	0.0115	0.0054
110	0.0170	0.0115	0.0055
111	0.0171	0.0116	0.0055
112	0.0172	0.0116	0.0055
113	0.0173	0.0117	0.0056
114	0.0173	0.0118	0.0056
115	0.0175	0.0118	0.0056
116	0.0175	0.0119	0.0056
117	0.0177	0.0120	0.0057
118	0.0177	0.0120	0.0057
119	0.0178	0.0121	0.0057
120	0.0179	0.0122	0.0058
121	0.0180	0.0122	0.0058
122	0.0181	0.0123	0.0058
123	0.0183	0.0124	0.0059
124	0.0183	0.0124	0.0059
125	0.0185	0.0125	0.0059
126	0.0186	0.0126	0.0060
127	0.0187	0.0127	0.0060
128	0.0188	0.0127	0.0060
129	0.0189	0.0129	0.0061
130	0.0190	0.0129	0.0061
131	0.0192	0.0130	0.0062
132	0.0193	0.0131	0.0062
133	0.0194	0.0132	0.0063
134	0.0195	0.0133	0.0063
135	0.0197	0.0134	0.0063
136	0.0198	0.0134	0.0064
137	0.0200	0.0136	0.0064
138	0.0201	0.0136	0.0065
139	0.0203	0.0138	0.0065
140	0.0204	0.0138	0.0066
141	0.0206	0.0140	0.0066
142	0.0207	0.0141	0.0067
143	0.0210	0.0142	0.0067
144	0.0211	0.0143	0.0068
145	0.0224	0.0152	0.0072
146	0.0225	0.0153	0.0072
147	0.0227	0.0154	0.0073
148	0.0229	0.0155	0.0074

149	0.0231	0.0157	0.0074
150	0.0233	0.0158	0.0075
151	0.0235	0.0160	0.0076
152	0.0237	0.0161	0.0076
153	0.0240	0.0163	0.0077
154	0.0241	0.0164	0.0078
155	0.0245	0.0166	0.0079
156	0.0246	0.0167	0.0079
157	0.0250	0.0169	0.0080
158	0.0251	0.0171	0.0081
159	0.0255	0.0173	0.0082
160	0.0257	0.0174	0.0083
161	0.0261	0.0177	0.0084
162	0.0263	0.0179	0.0085
163	0.0268	0.0182	0.0086
164	0.0270	0.0183	0.0087
165	0.0275	0.0186	0.0088
166	0.0277	0.0188	0.0089
167	0.0283	0.0192	0.0091
168	0.0286	0.0194	0.0092
169	0.0292	0.0198	0.0094
170	0.0295	0.0200	0.0095
171	0.0302	0.0205	0.0097
172	0.0305	0.0207	0.0098
173	0.0313	0.0212	0.0101
174	0.0317	0.0215	0.0102
175	0.0326	0.0221	0.0105
176	0.0331	0.0224	0.0106
177	0.0341	0.0231	0.0110
178	0.0347	0.0235	0.0111
179	0.0359	0.0244	0.0115
180	0.0366	0.0248	0.0118
181	0.0381	0.0259	0.0123
182	0.0390	0.0265	0.0125
183	0.0409	0.0278	0.0132
184	0.0421	0.0285	0.0135
185	0.0219	0.0148	0.0070
186	0.0233	0.0158	0.0075
187	0.0270	0.0183	0.0087
188	0.0295	0.0200	0.0095
189	0.0367	0.0249	0.0118
190	0.0423	0.0287	0.0136
191	0.0642	0.0435	0.0206
192	0.0931	0.0559	0.0372
193	0.4030	0.0559	0.3470
194	0.0505	0.0343	0.0162
195	0.0326	0.0222	0.0105
196	0.0250	0.0170	0.0080
197	0.0433	0.0294	0.0139
198	0.0399	0.0271	0.0128
199	0.0373	0.0253	0.0120
200	0.0353	0.0239	0.0113
201	0.0336	0.0228	0.0108
202	0.0321	0.0218	0.0103
203	0.0309	0.0210	0.0099
204	0.0298	0.0202	0.0096
205	0.0289	0.0196	0.0093
206	0.0280	0.0190	0.0090
207	0.0272	0.0185	0.0088
208	0.0265	0.0180	0.0085
209	0.0259	0.0176	0.0083
210	0.0253	0.0172	0.0081
211	0.0248	0.0168	0.0080
212	0.0243	0.0165	0.0078
213	0.0238	0.0162	0.0077
214	0.0234	0.0159	0.0075
215	0.0230	0.0156	0.0074
216	0.0226	0.0153	0.0073
217	0.0212	0.0144	0.0068
218	0.0208	0.0141	0.0067
219	0.0205	0.0139	0.0066

220	0.0202	0.0137	0.0065
221	0.0199	0.0135	0.0064
222	0.0196	0.0133	0.0063
223	0.0194	0.0131	0.0062
224	0.0191	0.0130	0.0061
225	0.0189	0.0128	0.0061
226	0.0186	0.0126	0.0060
227	0.0184	0.0125	0.0059
228	0.0182	0.0123	0.0058
229	0.0180	0.0122	0.0058
230	0.0178	0.0121	0.0057
231	0.0176	0.0119	0.0057
232	0.0174	0.0118	0.0056
233	0.0172	0.0117	0.0055
234	0.0171	0.0116	0.0055
235	0.0169	0.0115	0.0054
236	0.0167	0.0113	0.0054
237	0.0166	0.0112	0.0053
238	0.0164	0.0111	0.0053
239	0.0163	0.0110	0.0052
240	0.0161	0.0109	0.0052
241	0.0160	0.0109	0.0051
242	0.0159	0.0108	0.0051
243	0.0157	0.0107	0.0051
244	0.0156	0.0106	0.0050
245	0.0155	0.0105	0.0050
246	0.0154	0.0104	0.0049
247	0.0152	0.0103	0.0049
248	0.0151	0.0103	0.0049
249	0.0150	0.0102	0.0048
250	0.0149	0.0101	0.0048
251	0.0148	0.0100	0.0048
252	0.0147	0.0100	0.0047
253	0.0146	0.0099	0.0047
254	0.0145	0.0098	0.0047
255	0.0144	0.0098	0.0046
256	0.0143	0.0097	0.0046
257	0.0142	0.0097	0.0046
258	0.0141	0.0096	0.0045
259	0.0141	0.0095	0.0045
260	0.0140	0.0095	0.0045
261	0.0139	0.0094	0.0045
262	0.0138	0.0094	0.0044
263	0.0137	0.0093	0.0044
264	0.0136	0.0093	0.0044
265	0.0136	0.0092	0.0044
266	0.0135	0.0092	0.0043
267	0.0134	0.0091	0.0043
268	0.0133	0.0091	0.0043
269	0.0133	0.0090	0.0043
270	0.0132	0.0090	0.0042
271	0.0131	0.0089	0.0042
272	0.0131	0.0089	0.0042
273	0.0130	0.0088	0.0042
274	0.0129	0.0088	0.0042
275	0.0129	0.0087	0.0041
276	0.0128	0.0087	0.0041
277	0.0127	0.0086	0.0041
278	0.0127	0.0086	0.0041
279	0.0126	0.0086	0.0041
280	0.0126	0.0085	0.0040
281	0.0125	0.0085	0.0040
282	0.0124	0.0084	0.0040
283	0.0124	0.0084	0.0040
284	0.0123	0.0084	0.0040
285	0.0123	0.0083	0.0039
286	0.0122	0.0083	0.0039
287	0.0122	0.0083	0.0039
288	0.0121	0.0082	0.0039

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      Total soil rain loss =      3.76(In)
      Total effective rainfall =      2.11(In)
      Peak flow rate in flood hydrograph =     11.51(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0001      0.02  Q         |         |         |         |
  0+10       0.0011      0.13  Q         |         |         |         |
  0+15       0.0027      0.23  Q         |         |         |         |
  0+20       0.0045      0.27  Q         |         |         |         |
  0+25       0.0065      0.29  Q         |         |         |         |
  0+30       0.0086      0.31  Q         |         |         |         |
  0+35       0.0108      0.31  Q         |         |         |         |
  0+40       0.0130      0.31  Q         |         |         |         |
  0+45       0.0151      0.32  Q         |         |         |         |
  0+50       0.0173      0.32  Q         |         |         |         |
  0+55       0.0196      0.32  Q         |         |         |         |
  1+ 0       0.0218      0.32  Q         |         |         |         |
  1+ 5       0.0240      0.32  Q         |         |         |         |
  1+10       0.0262      0.32  Q         |         |         |         |
  1+15       0.0284      0.32  Q         |         |         |         |
  1+20       0.0307      0.32  QV        |         |         |         |
  1+25       0.0329      0.32  QV        |         |         |         |
  1+30       0.0351      0.33  QV        |         |         |         |
  1+35       0.0374      0.33  QV        |         |         |         |
  1+40       0.0396      0.33  QV        |         |         |         |
  1+45       0.0419      0.33  QV        |         |         |         |
  1+50       0.0442      0.33  QV        |         |         |         |
  1+55       0.0464      0.33  QV        |         |         |         |
  2+ 0       0.0487      0.33  QV        |         |         |         |
  2+ 5       0.0510      0.33  QV        |         |         |         |
  2+10       0.0533      0.33  QV        |         |         |         |
  2+15       0.0556      0.33  QV        |         |         |         |
  2+20       0.0579      0.33  QV        |         |         |         |
  2+25       0.0602      0.33  Q V       |         |         |         |
  2+30       0.0625      0.34  Q V       |         |         |         |
  2+35       0.0648      0.34  Q V       |         |         |         |
  2+40       0.0671      0.34  Q V       |         |         |         |
  2+45       0.0694      0.34  Q V       |         |         |         |
  2+50       0.0718      0.34  Q V       |         |         |         |
  2+55       0.0741      0.34  Q V       |         |         |         |
  3+ 0       0.0765      0.34  Q V       |         |         |         |
  3+ 5       0.0788      0.34  Q V       |         |         |         |
  3+10       0.0812      0.34  Q V       |         |         |         |
  3+15       0.0835      0.34  Q V       |         |         |         |
  3+20       0.0859      0.34  Q V       |         |         |         |
  3+25       0.0883      0.34  Q V       |         |         |         |
  3+30       0.0906      0.35  Q  V      |         |         |         |
  3+35       0.0930      0.35  Q  V      |         |         |         |
  3+40       0.0954      0.35  Q  V      |         |         |         |
  3+45       0.0978      0.35  Q  V      |         |         |         |
  3+50       0.1002      0.35  Q  V      |         |         |         |
  3+55       0.1026      0.35  Q  V      |         |         |         |
  4+ 0       0.1051      0.35  Q  V      |         |         |         |
  4+ 5       0.1075      0.35  Q  V      |         |         |         |
  4+10       0.1099      0.35  Q  V      |         |         |         |
  4+15       0.1124      0.35  Q  V      |         |         |         |
  4+20       0.1148      0.36  Q  V      |         |         |         |
  4+25       0.1173      0.36  Q  V      |         |         |         |
  4+30       0.1197      0.36  Q   V     |         |         |         |
  4+35       0.1222      0.36  Q   V     |         |         |         |
  4+40       0.1247      0.36  Q   V     |         |         |         |
  4+45       0.1272      0.36  Q   V     |         |         |         |
  4+50       0.1296      0.36  Q   V     |         |         |         |
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 4+55      0.1321      0.36  Q   V     |          |          |          |
 5+ 0      0.1346      0.36  Q   V     |          |          |          |
 5+ 5      0.1372      0.36  Q   V     |          |          |          |
 5+10      0.1397      0.37  Q   V     |          |          |          |
 5+15      0.1422      0.37  Q   V     |          |          |          |
 5+20      0.1447      0.37  Q   V     |          |          |          |
 5+25      0.1473      0.37  Q   V     |          |          |          |
 5+30      0.1498      0.37  Q    V    |          |          |          |
 5+35      0.1524      0.37  Q    V    |          |          |          |
 5+40      0.1550      0.37  Q    V    |          |          |          |
 5+45      0.1575      0.37  Q    V    |          |          |          |
 5+50      0.1601      0.38  Q    V    |          |          |          |
 5+55      0.1627      0.38  Q    V    |          |          |          |
 6+ 0      0.1653      0.38  Q    V    |          |          |          |
 6+ 5      0.1679      0.38  Q    V    |          |          |          |
 6+10      0.1706      0.38  Q    V    |          |          |          |
 6+15      0.1732      0.38  Q    V    |          |          |          |
 6+20      0.1758      0.38  Q    V    |          |          |          |
 6+25      0.1785      0.38  Q     V   |          |          |          |
 6+30      0.1811      0.39  Q     V   |          |          |          |
 6+35      0.1838      0.39  Q     V   |          |          |          |
 6+40      0.1865      0.39  Q     V   |          |          |          |
 6+45      0.1892      0.39  Q     V   |          |          |          |
 6+50      0.1919      0.39  Q     V   |          |          |          |
 6+55      0.1946      0.39  Q     V   |          |          |          |
 7+ 0      0.1973      0.39  Q     V   |          |          |          |
 7+ 5      0.2000      0.40  Q     V   |          |          |          |
 7+10      0.2027      0.40  Q     V   |          |          |          |
 7+15      0.2055      0.40  Q     V   |          |          |          |
 7+20      0.2082      0.40  Q      V  |          |          |          |
 7+25      0.2110      0.40  Q      V  |          |          |          |
 7+30      0.2138      0.40  Q      V  |          |          |          |
 7+35      0.2166      0.40  Q      V  |          |          |          |
 7+40      0.2194      0.41  Q      V  |          |          |          |
 7+45      0.2222      0.41  Q      V  |          |          |          |
 7+50      0.2250      0.41  Q      V  |          |          |          |
 7+55      0.2278      0.41  Q      V  |          |          |          |
 8+ 0      0.2307      0.41  Q      V  |          |          |          |
 8+ 5      0.2335      0.41  Q      V  |          |          |          |
 8+10      0.2364      0.42  Q       V |          |          |          |
 8+15      0.2393      0.42  Q       V |          |          |          |
 8+20      0.2422      0.42  Q       V |          |          |          |
 8+25      0.2451      0.42  Q       V |          |          |          |
 8+30      0.2480      0.42  Q       V |          |          |          |
 8+35      0.2509      0.43  Q       V |          |          |          |
 8+40      0.2539      0.43  Q       V |          |          |          |
 8+45      0.2568      0.43  Q       V |          |          |          |
 8+50      0.2598      0.43  Q       V |          |          |          |
 8+55      0.2628      0.43  Q       V |          |          |          |
 9+ 0      0.2658      0.44  Q        V|          |          |          |
 9+ 5      0.2688      0.44  Q        V|          |          |          |
 9+10      0.2718      0.44  Q        V|          |          |          |
 9+15      0.2748      0.44  Q        V|          |          |          |
 9+20      0.2779      0.44  Q        V|          |          |          |
 9+25      0.2810      0.45  Q        V|          |          |          |
 9+30      0.2841      0.45  Q        V|          |          |          |
 9+35      0.2872      0.45  Q        V|          |          |          |
 9+40      0.2903      0.45  Q        V|          |          |          |
 9+45      0.2934      0.46  Q        V|          |          |          |
 9+50      0.2966      0.46  Q         V          |          |          |
 9+55      0.2997      0.46  Q         V          |          |          |
10+ 0      0.3029      0.46  Q         V          |          |          |
10+ 5      0.3061      0.47  Q         V          |          |          |
10+10      0.3093      0.47  Q         V          |          |          |
10+15      0.3126      0.47  Q         V          |          |          |
10+20      0.3158      0.47  Q         V          |          |          |
10+25      0.3191      0.48  Q         V          |          |          |
10+30      0.3224      0.48  Q         V          |          |          |
10+35      0.3257      0.48  Q         |V         |          |          |
10+40      0.3291      0.48  Q         |V         |          |          |
10+45      0.3324      0.49  Q         |V         |          |          |
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10+50       0.3358      0.49  Q          |V         |          |          |
10+55       0.3392      0.49  Q          |V         |          |          |
11+ 0       0.3426      0.50  Q          |V         |          |          |
11+ 5       0.3461      0.50  Q          |V         |          |          |
11+10       0.3495      0.50  |Q         |V         |          |          |
11+15       0.3530      0.51  |Q         |V         |          |          |
11+20       0.3565      0.51  |Q         | V        |          |          |
11+25       0.3601      0.51  |Q         | V        |          |          |
11+30       0.3636      0.52  |Q         | V        |          |          |
11+35       0.3672      0.52  |Q         | V        |          |          |
11+40       0.3708      0.53  |Q         | V        |          |          |
11+45       0.3745      0.53  |Q         | V        |          |          |
11+50       0.3782      0.53  |Q         | V        |          |          |
11+55       0.3819      0.54  |Q         | V        |          |          |
12+ 0       0.3856      0.54  |Q         |  V       |          |          |
12+ 5       0.3894      0.55  |Q         |  V       |          |          |
12+10       0.3932      0.56  |Q         |  V       |          |          |
12+15       0.3972      0.58  |Q         |  V       |          |          |
12+20       0.4012      0.58  |Q         |  V       |          |          |
12+25       0.4053      0.59  |Q         |  V       |          |          |
12+30       0.4094      0.60  |Q         |  V       |          |          |
12+35       0.4135      0.60  |Q         |   V      |          |          |
12+40       0.4177      0.61  |Q         |   V      |          |          |
12+45       0.4219      0.61  |Q         |   V      |          |          |
12+50       0.4262      0.62  |Q         |   V      |          |          |
12+55       0.4305      0.62  |Q         |   V      |          |          |
13+ 0       0.4348      0.63  |Q         |   V      |          |          |
13+ 5       0.4392      0.64  |Q         |   V      |          |          |
13+10       0.4437      0.64  |Q         |    V     |          |          |
13+15       0.4481      0.65  |Q         |    V     |          |          |
13+20       0.4527      0.66  |Q         |    V     |          |          |
13+25       0.4572      0.66  |Q         |    V     |          |          |
13+30       0.4619      0.67  |Q         |    V     |          |          |
13+35       0.4665      0.68  |Q         |    V     |          |          |
13+40       0.4713      0.69  |Q         |    V     |          |          |
13+45       0.4761      0.70  |Q         |     V    |          |          |
13+50       0.4809      0.71  |Q         |     V    |          |          |
13+55       0.4859      0.72  |Q         |     V    |          |          |
14+ 0       0.4909      0.73  |Q         |     V    |          |          |
14+ 5       0.4959      0.74  |Q         |     V    |          |          |
14+10       0.5011      0.75  |Q         |     V    |          |          |
14+15       0.5063      0.76  |Q         |      V   |          |          |
14+20       0.5116      0.77  |Q         |      V   |          |          |
14+25       0.5170      0.78  |Q         |      V   |          |          |
14+30       0.5225      0.80  |Q         |      V   |          |          |
14+35       0.5281      0.81  |Q         |      V   |          |          |
14+40       0.5338      0.83  |Q         |       V  |          |          |
14+45       0.5397      0.85  |Q         |       V  |          |          |
14+50       0.5456      0.87  |Q         |       V  |          |          |
14+55       0.5518      0.89  |Q         |       V  |          |          |
15+ 0       0.5580      0.91  |Q         |       V  |          |          |
15+ 5       0.5644      0.93  |Q         |        V |          |          |
15+10       0.5711      0.96  |Q         |        V |          |          |
15+15       0.5779      0.99  |Q         |        V |          |          |
15+20       0.5849      1.03  | Q        |        V |          |          |
15+25       0.5920      1.03  | Q        |         V|          |          |
15+30       0.5979      0.86  |Q         |         V|          |          |
15+35       0.6029      0.72  |Q         |         V|          |          |
15+40       0.6078      0.71  |Q         |         V|          |          |
15+45       0.6130      0.75  |Q         |         V|          |          |
15+50       0.6188      0.84  |Q         |         V|          |          |
15+55       0.6257      1.00  |Q         |         |V         |          |
16+ 0       0.6350      1.36  | Q        |         |V         |          |
16+ 5       0.6600      3.62  |      Q   |         | V        |          |
16+10       0.7392     11.51  |          |         |  Q V     |          |
16+15       0.8084     10.04  |          |         Q      V   |          |
16+20       0.8385      4.37  |        Q |         |       V  |          |
16+25       0.8575      2.77  |    Q     |         |        V |          |
16+30       0.8715      2.02  |   Q      |         |        V |          |
16+35       0.8820      1.53  |  Q       |         |        V |          |
16+40       0.8903      1.20  | Q        |         |         V|          |
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16+45       0.8978      1.10  | Q       |         |         V         |
16+50       0.9050      1.04  | Q       |         |         V         |
16+55       0.9116      0.95  |Q        |         |         V         |
17+ 0       0.9174      0.84  |Q        |         |         |V        |
17+ 5       0.9230      0.81  |Q        |         |         |V        |
17+10       0.9284      0.78  |Q        |         |         |V        |
17+15       0.9336      0.76  |Q        |         |         |V        |
17+20       0.9387      0.74  |Q        |         |         |V        |
17+25       0.9436      0.71  |Q        |         |         |V        |
17+30       0.9484      0.70  |Q        |         |         | V       |
17+35       0.9530      0.68  |Q        |         |         | V       |
17+40       0.9576      0.66  |Q        |         |         | V       |
17+45       0.9621      0.65  |Q        |         |         | V       |
17+50       0.9665      0.64  |Q        |         |         | V       |
17+55       0.9708      0.62  |Q        |         |         | V       |
18+ 0       0.9750      0.61  |Q        |         |         |  V      |
18+ 5       0.9791      0.60  |Q        |         |         |  V      |
18+10       0.9831      0.58  |Q        |         |         |  V      |
18+15       0.9870      0.56  |Q        |         |         |  V      |
18+20       0.9907      0.55  |Q        |         |         |  V      |
18+25       0.9945      0.54  |Q        |         |         |  V      |
18+30       0.9981      0.53  |Q        |         |         |  V      |
18+35       1.0017      0.52  |Q        |         |         |  V      |
18+40       1.0052      0.51  |Q        |         |         |   V     |
18+45       1.0087      0.51  |Q        |         |         |   V     |
18+50       1.0122      0.50  Q         |         |         |   V     |
18+55       1.0155      0.49  Q         |         |         |   V     |
19+ 0       1.0189      0.49  Q         |         |         |   V     |
19+ 5       1.0222      0.48  Q         |         |         |   V     |
19+10       1.0255      0.48  Q         |         |         |   V     |
19+15       1.0287      0.47  Q         |         |         |   V     |
19+20       1.0319      0.46  Q         |         |         |   V     |
19+25       1.0351      0.46  Q         |         |         |    V    |
19+30       1.0382      0.45  Q         |         |         |    V    |
19+35       1.0413      0.45  Q         |         |         |    V    |
19+40       1.0444      0.45  Q         |         |         |    V    |
19+45       1.0474      0.44  Q         |         |         |    V    |
19+50       1.0504      0.44  Q         |         |         |    V    |
19+55       1.0534      0.43  Q         |         |         |    V    |
20+ 0       1.0564      0.43  Q         |         |         |    V    |
20+ 5       1.0593      0.43  Q         |         |         |    V    |
20+10       1.0622      0.42  Q         |         |         |    V    |
20+15       1.0651      0.42  Q         |         |         |     V   |
20+20       1.0679      0.41  Q         |         |         |     V   |
20+25       1.0708      0.41  Q         |         |         |     V   |
20+30       1.0736      0.41  Q         |         |         |     V   |
20+35       1.0763      0.40  Q         |         |         |     V   |
20+40       1.0791      0.40  Q         |         |         |     V   |
20+45       1.0819      0.40  Q         |         |         |     V   |
20+50       1.0846      0.40  Q         |         |         |     V   |
20+55       1.0873      0.39  Q         |         |         |     V   |
21+ 0       1.0900      0.39  Q         |         |         |     V   |
21+ 5       1.0926      0.39  Q         |         |         |      V  |
21+10       1.0953      0.38  Q         |         |         |      V  |
21+15       1.0979      0.38  Q         |         |         |      V  |
21+20       1.1005      0.38  Q         |         |         |      V  |
21+25       1.1031      0.38  Q         |         |         |      V  |
21+30       1.1057      0.37  Q         |         |         |      V  |
21+35       1.1082      0.37  Q         |         |         |      V  |
21+40       1.1108      0.37  Q         |         |         |      V  |
21+45       1.1133      0.37  Q         |         |         |      V  |
21+50       1.1158      0.36  Q         |         |         |      V  |
21+55       1.1183      0.36  Q         |         |         |      V  |
22+ 0       1.1208      0.36  Q         |         |         |      V  |
22+ 5       1.1233      0.36  Q         |         |         |       V |
22+10       1.1257      0.36  Q         |         |         |       V |
22+15       1.1281      0.35  Q         |         |         |       V |
22+20       1.1306      0.35  Q         |         |         |       V |
22+25       1.1330      0.35  Q         |         |         |       V |
22+30       1.1354      0.35  Q         |         |         |       V |
22+35       1.1378      0.35  Q         |         |         |       V |
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   22+40       1.1401      0.34  Q          |          |          |        V |
   22+45       1.1425      0.34  Q          |          |          |        V |
   22+50       1.1448      0.34  Q          |          |          |        V |
   22+55       1.1472      0.34  Q          |          |          |        V |
   23+ 0       1.1495      0.34  Q          |          |          |        V |
   23+ 5       1.1518      0.34  Q          |          |          |         V|
   23+10       1.1541      0.33  Q          |          |          |         V|
   23+15       1.1564      0.33  Q          |          |          |         V|
   23+20       1.1587      0.33  Q          |          |          |         V|
   23+25       1.1610      0.33  Q          |          |          |         V|
   23+30       1.1632      0.33  Q          |          |          |         V|
   23+35       1.1655      0.33  Q          |          |          |         V|
   23+40       1.1677      0.32  Q          |          |          |         V|
   23+45       1.1699      0.32  Q          |          |          |         V|
   23+50       1.1721      0.32  Q          |          |          |         V|
   23+55       1.1743      0.32  Q          |          |          |         V|
   24+ 0       1.1765      0.32  Q          |          |          |         V|
   24+ 5       1.1786      0.30  Q          |          |          |         V|
   24+10       1.1799      0.18  Q          |          |          |         V|
   24+15       1.1804      0.08  Q          |          |          |         V|
   24+20       1.1807      0.05  Q          |          |          |         V|
   24+25       1.1809      0.02  Q          |          |          |         V|
   24+30       1.1810      0.01  Q          |          |          |         V|
   24+35       1.1810      0.01  Q          |          |          |         V|
   24+40       1.1811      0.00  Q          |          |          |         V|
   24+45       1.1811      0.00  Q          |          |          |         V|
   24+50       1.1811      0.00  Q          |          |          |          V
-------------------------------------------------------------------------
```

Area 'F' – 10 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'F'
10 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.71           1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.71           6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.71          24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             6.71           1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.71           6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.71          24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      78.0          6.71      1.000     0.404    1.000    0.404

Area-averaged adjusted loss rate Fm (In/Hr) =  0.404

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
6.71	1.000	78.0	78.0	2.82	0.650

Area-averaged catchment yield fraction, Y = 0.650
Area-averaged low loss fraction, Yb = 0.350
User entry of time of concentration = 0.162 (hours)
++
Watershed area = 6.71(Ac.)
Catchment Lag time = 0.130 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 64.3004
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.404(In/Hr)
Average low loss rate fraction (Yb) = 0.350 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 6.71(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.474(In)
30-minute factor = 1.000 Adjusted rainfall = 0.812(In)
1-hour factor = 1.000 Adjusted rainfall = 1.000(In)
3-hour factor = 1.000 Adjusted rainfall = 1.973(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 81.15 (CFS))	
1	6.228	5.054
2	42.193	29.185
3	74.058	25.858
4	85.789	9.519
5	92.451	5.407
6	96.283	3.110
7	98.090	1.467
8	98.816	0.589
9	99.292	0.386
10	99.729	0.355
11	100.000	0.220

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4744	0.4744
2	0.5840	0.1096
3	0.6595	0.0755
4	0.7190	0.0595
5	0.7688	0.0498
6	0.8120	0.0432
7	0.8504	0.0384
8	0.8852	0.0348
9	0.9170	0.0318
10	0.9465	0.0294
11	0.9739	0.0275
12	0.9997	0.0258
13	1.0504	0.0508
14	1.0997	0.0493
15	1.1477	0.0480

16	1.1944	0.0468
17	1.2401	0.0457
18	1.2847	0.0446
19	1.3284	0.0437
20	1.3712	0.0428
21	1.4133	0.0420
22	1.4545	0.0413
23	1.4951	0.0406
24	1.5350	0.0399
25	1.5742	0.0393
26	1.6129	0.0387
27	1.6510	0.0381
28	1.6886	0.0376
29	1.7256	0.0371
30	1.7622	0.0366
31	1.7983	0.0361
32	1.8340	0.0357
33	1.8693	0.0352
34	1.9041	0.0348
35	1.9386	0.0345
36	1.9726	0.0341
37	2.0064	0.0337
38	2.0397	0.0334
39	2.0727	0.0330
40	2.1055	0.0327
41	2.1379	0.0324
42	2.1700	0.0321
43	2.2018	0.0318
44	2.2333	0.0315
45	2.2646	0.0313
46	2.2955	0.0310
47	2.3263	0.0307
48	2.3568	0.0305
49	2.3870	0.0302
50	2.4170	0.0300
51	2.4468	0.0298
52	2.4764	0.0296
53	2.5057	0.0293
54	2.5349	0.0291
55	2.5638	0.0289
56	2.5925	0.0287
57	2.6210	0.0285
58	2.6494	0.0283
59	2.6775	0.0282
60	2.7055	0.0280
61	2.7333	0.0278
62	2.7609	0.0276
63	2.7884	0.0275
64	2.8157	0.0273
65	2.8428	0.0271
66	2.8698	0.0270
67	2.8966	0.0268
68	2.9233	0.0267
69	2.9498	0.0265
70	2.9762	0.0264
71	3.0024	0.0262
72	3.0285	0.0261
73	3.0550	0.0266
74	3.0815	0.0265
75	3.1078	0.0263
76	3.1340	0.0262
77	3.1601	0.0261
78	3.1861	0.0259
79	3.2119	0.0258
80	3.2376	0.0257
81	3.2632	0.0256
82	3.2887	0.0255
83	3.3140	0.0254
84	3.3393	0.0253
85	3.3644	0.0251
86	3.3894	0.0250

87	3.4144	0.0249
88	3.4392	0.0248
89	3.4639	0.0247
90	3.4885	0.0246
91	3.5130	0.0245
92	3.5375	0.0244
93	3.5618	0.0243
94	3.5860	0.0242
95	3.6101	0.0241
96	3.6342	0.0240
97	3.6581	0.0239
98	3.6820	0.0239
99	3.7057	0.0238
100	3.7294	0.0237
101	3.7530	0.0236
102	3.7765	0.0235
103	3.8000	0.0234
104	3.8233	0.0233
105	3.8466	0.0233
106	3.8697	0.0232
107	3.8928	0.0231
108	3.9158	0.0230
109	3.9388	0.0229
110	3.9617	0.0229
111	3.9844	0.0228
112	4.0072	0.0227
113	4.0298	0.0226
114	4.0524	0.0226
115	4.0749	0.0225
116	4.0973	0.0224
117	4.1196	0.0224
118	4.1419	0.0223
119	4.1641	0.0222
120	4.1863	0.0221
121	4.2083	0.0221
122	4.2303	0.0220
123	4.2523	0.0219
124	4.2742	0.0219
125	4.2960	0.0218
126	4.3177	0.0218
127	4.3394	0.0217
128	4.3610	0.0216
129	4.3826	0.0216
130	4.4041	0.0215
131	4.4255	0.0214
132	4.4469	0.0214
133	4.4683	0.0213
134	4.4895	0.0213
135	4.5107	0.0212
136	4.5319	0.0211
137	4.5530	0.0211
138	4.5740	0.0210
139	4.5950	0.0210
140	4.6159	0.0209
141	4.6368	0.0209
142	4.6576	0.0208
143	4.6783	0.0208
144	4.6991	0.0207
145	4.7197	0.0207
146	4.7403	0.0206
147	4.7609	0.0206
148	4.7814	0.0205
149	4.8018	0.0205
150	4.8222	0.0204
151	4.8426	0.0204
152	4.8629	0.0203
153	4.8831	0.0203
154	4.9033	0.0202
155	4.9235	0.0202
156	4.9436	0.0201
157	4.9636	0.0201

158	4.9837	0.0200
159	5.0036	0.0200
160	5.0236	0.0199
161	5.0434	0.0199
162	5.0633	0.0198
163	5.0830	0.0198
164	5.1028	0.0197
165	5.1225	0.0197
166	5.1421	0.0197
167	5.1618	0.0196
168	5.1813	0.0196
169	5.2008	0.0195
170	5.2203	0.0195
171	5.2398	0.0194
172	5.2592	0.0194
173	5.2785	0.0194
174	5.2978	0.0193
175	5.3171	0.0193
176	5.3364	0.0192
177	5.3556	0.0192
178	5.3747	0.0192
179	5.3938	0.0191
180	5.4129	0.0191
181	5.4319	0.0190
182	5.4509	0.0190
183	5.4699	0.0190
184	5.4888	0.0189
185	5.5077	0.0189
186	5.5266	0.0189
187	5.5454	0.0188
188	5.5642	0.0188
189	5.5829	0.0187
190	5.6016	0.0187
191	5.6203	0.0187
192	5.6389	0.0186
193	5.6575	0.0186
194	5.6761	0.0186
195	5.6946	0.0185
196	5.7131	0.0185
197	5.7315	0.0185
198	5.7500	0.0184
199	5.7683	0.0184
200	5.7867	0.0184
201	5.8050	0.0183
202	5.8233	0.0183
203	5.8416	0.0183
204	5.8598	0.0182
205	5.8780	0.0182
206	5.8961	0.0182
207	5.9143	0.0181
208	5.9323	0.0181
209	5.9504	0.0181
210	5.9684	0.0180
211	5.9864	0.0180
212	6.0044	0.0180
213	6.0223	0.0179
214	6.0402	0.0179
215	6.0581	0.0179
216	6.0760	0.0178
217	6.0938	0.0178
218	6.1116	0.0178
219	6.1293	0.0178
220	6.1470	0.0177
221	6.1647	0.0177
222	6.1824	0.0177
223	6.2000	0.0176
224	6.2176	0.0176
225	6.2352	0.0176
226	6.2528	0.0175
227	6.2703	0.0175
228	6.2878	0.0175

229	6.3052	0.0175
230	6.3227	0.0174
231	6.3401	0.0174
232	6.3575	0.0174
233	6.3748	0.0174
234	6.3921	0.0173
235	6.4094	0.0173
236	6.4267	0.0173
237	6.4440	0.0172
238	6.4612	0.0172
239	6.4784	0.0172
240	6.4955	0.0172
241	6.5127	0.0171
242	6.5298	0.0171
243	6.5469	0.0171
244	6.5639	0.0171
245	6.5810	0.0170
246	6.5980	0.0170
247	6.6150	0.0170
248	6.6319	0.0170
249	6.6489	0.0169
250	6.6658	0.0169
251	6.6827	0.0169
252	6.6995	0.0169
253	6.7164	0.0168
254	6.7332	0.0168
255	6.7500	0.0168
256	6.7667	0.0168
257	6.7835	0.0167
258	6.8002	0.0167
259	6.8169	0.0167
260	6.8336	0.0167
261	6.8502	0.0166
262	6.8668	0.0166
263	6.8834	0.0166
264	6.9000	0.0166
265	6.9166	0.0166
266	6.9331	0.0165
267	6.9496	0.0165
268	6.9661	0.0165
269	6.9825	0.0165
270	6.9990	0.0164
271	7.0154	0.0164
272	7.0318	0.0164
273	7.0482	0.0164
274	7.0645	0.0164
275	7.0809	0.0163
276	7.0972	0.0163
277	7.1134	0.0163
278	7.1297	0.0163
279	7.1460	0.0162
280	7.1622	0.0162
281	7.1784	0.0162
282	7.1946	0.0162
283	7.2107	0.0162
284	7.2269	0.0161
285	7.2430	0.0161
286	7.2591	0.0161
287	7.2751	0.0161
288	7.2912	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0056	0.0104
2	0.0161	0.0056	0.0105
3	0.0161	0.0056	0.0105
4	0.0161	0.0056	0.0105
5	0.0162	0.0057	0.0105
6	0.0162	0.0057	0.0105

7	0.0162	0.0057	0.0106
8	0.0163	0.0057	0.0106
9	0.0163	0.0057	0.0106
10	0.0163	0.0057	0.0106
11	0.0164	0.0057	0.0106
12	0.0164	0.0057	0.0107
13	0.0164	0.0058	0.0107
14	0.0165	0.0058	0.0107
15	0.0165	0.0058	0.0107
16	0.0165	0.0058	0.0107
17	0.0166	0.0058	0.0108
18	0.0166	0.0058	0.0108
19	0.0166	0.0058	0.0108
20	0.0167	0.0058	0.0108
21	0.0167	0.0058	0.0109
22	0.0167	0.0059	0.0109
23	0.0168	0.0059	0.0109
24	0.0168	0.0059	0.0109
25	0.0169	0.0059	0.0110
26	0.0169	0.0059	0.0110
27	0.0169	0.0059	0.0110
28	0.0170	0.0059	0.0110
29	0.0170	0.0060	0.0111
30	0.0170	0.0060	0.0111
31	0.0171	0.0060	0.0111
32	0.0171	0.0060	0.0111
33	0.0172	0.0060	0.0112
34	0.0172	0.0060	0.0112
35	0.0172	0.0060	0.0112
36	0.0173	0.0060	0.0112
37	0.0173	0.0061	0.0113
38	0.0174	0.0061	0.0113
39	0.0174	0.0061	0.0113
40	0.0174	0.0061	0.0113
41	0.0175	0.0061	0.0114
42	0.0175	0.0061	0.0114
43	0.0176	0.0062	0.0114
44	0.0176	0.0062	0.0114
45	0.0177	0.0062	0.0115
46	0.0177	0.0062	0.0115
47	0.0178	0.0062	0.0115
48	0.0178	0.0062	0.0116
49	0.0178	0.0062	0.0116
50	0.0179	0.0063	0.0116
51	0.0179	0.0063	0.0117
52	0.0180	0.0063	0.0117
53	0.0180	0.0063	0.0117
54	0.0181	0.0063	0.0117
55	0.0181	0.0063	0.0118
56	0.0182	0.0064	0.0118
57	0.0182	0.0064	0.0118
58	0.0183	0.0064	0.0119
59	0.0183	0.0064	0.0119
60	0.0184	0.0064	0.0119
61	0.0184	0.0064	0.0120
62	0.0185	0.0065	0.0120
63	0.0185	0.0065	0.0120
64	0.0186	0.0065	0.0121
65	0.0186	0.0065	0.0121
66	0.0187	0.0065	0.0121
67	0.0187	0.0066	0.0122
68	0.0188	0.0066	0.0122
69	0.0189	0.0066	0.0123
70	0.0189	0.0066	0.0123
71	0.0190	0.0066	0.0123
72	0.0190	0.0066	0.0124
73	0.0191	0.0067	0.0124
74	0.0191	0.0067	0.0124
75	0.0192	0.0067	0.0125
76	0.0192	0.0067	0.0125
77	0.0193	0.0068	0.0126

78	0.0194	0.0068	0.0126
79	0.0194	0.0068	0.0126
80	0.0195	0.0068	0.0127
81	0.0196	0.0068	0.0127
82	0.0196	0.0069	0.0127
83	0.0197	0.0069	0.0128
84	0.0197	0.0069	0.0128
85	0.0198	0.0069	0.0129
86	0.0199	0.0070	0.0129
87	0.0200	0.0070	0.0130
88	0.0200	0.0070	0.0130
89	0.0201	0.0070	0.0131
90	0.0202	0.0071	0.0131
91	0.0203	0.0071	0.0132
92	0.0203	0.0071	0.0132
93	0.0204	0.0071	0.0133
94	0.0205	0.0072	0.0133
95	0.0206	0.0072	0.0134
96	0.0206	0.0072	0.0134
97	0.0207	0.0072	0.0135
98	0.0208	0.0073	0.0135
99	0.0209	0.0073	0.0136
100	0.0209	0.0073	0.0136
101	0.0210	0.0074	0.0137
102	0.0211	0.0074	0.0137
103	0.0212	0.0074	0.0138
104	0.0213	0.0074	0.0138
105	0.0214	0.0075	0.0139
106	0.0214	0.0075	0.0139
107	0.0216	0.0075	0.0140
108	0.0216	0.0076	0.0141
109	0.0218	0.0076	0.0141
110	0.0218	0.0076	0.0142
111	0.0219	0.0077	0.0143
112	0.0220	0.0077	0.0143
113	0.0221	0.0077	0.0144
114	0.0222	0.0078	0.0144
115	0.0224	0.0078	0.0145
116	0.0224	0.0078	0.0146
117	0.0226	0.0079	0.0147
118	0.0226	0.0079	0.0147
119	0.0228	0.0080	0.0148
120	0.0229	0.0080	0.0149
121	0.0230	0.0081	0.0150
122	0.0231	0.0081	0.0150
123	0.0233	0.0081	0.0151
124	0.0233	0.0082	0.0152
125	0.0235	0.0082	0.0153
126	0.0236	0.0083	0.0153
127	0.0238	0.0083	0.0155
128	0.0239	0.0083	0.0155
129	0.0240	0.0084	0.0156
130	0.0241	0.0084	0.0157
131	0.0243	0.0085	0.0158
132	0.0244	0.0085	0.0159
133	0.0246	0.0086	0.0160
134	0.0247	0.0086	0.0161
135	0.0249	0.0087	0.0162
136	0.0250	0.0088	0.0163
137	0.0253	0.0088	0.0164
138	0.0254	0.0089	0.0165
139	0.0256	0.0090	0.0166
140	0.0257	0.0090	0.0167
141	0.0259	0.0091	0.0169
142	0.0261	0.0091	0.0169
143	0.0263	0.0092	0.0171
144	0.0265	0.0093	0.0172
145	0.0261	0.0091	0.0170
146	0.0262	0.0092	0.0170
147	0.0265	0.0093	0.0172
148	0.0267	0.0093	0.0173

149	0.0270	0.0094	0.0175
150	0.0271	0.0095	0.0176
151	0.0275	0.0096	0.0178
152	0.0276	0.0097	0.0180
153	0.0280	0.0098	0.0182
154	0.0282	0.0099	0.0183
155	0.0285	0.0100	0.0185
156	0.0287	0.0101	0.0187
157	0.0291	0.0102	0.0189
158	0.0293	0.0103	0.0191
159	0.0298	0.0104	0.0194
160	0.0300	0.0105	0.0195
161	0.0305	0.0107	0.0198
162	0.0307	0.0108	0.0200
163	0.0313	0.0109	0.0203
164	0.0315	0.0110	0.0205
165	0.0321	0.0112	0.0209
166	0.0324	0.0113	0.0211
167	0.0330	0.0116	0.0215
168	0.0334	0.0117	0.0217
169	0.0341	0.0119	0.0222
170	0.0345	0.0121	0.0224
171	0.0352	0.0123	0.0229
172	0.0357	0.0125	0.0232
173	0.0366	0.0128	0.0238
174	0.0371	0.0130	0.0241
175	0.0381	0.0133	0.0248
176	0.0387	0.0135	0.0251
177	0.0399	0.0140	0.0259
178	0.0406	0.0142	0.0264
179	0.0420	0.0147	0.0273
180	0.0428	0.0150	0.0278
181	0.0446	0.0156	0.0290
182	0.0457	0.0160	0.0297
183	0.0480	0.0168	0.0312
184	0.0493	0.0172	0.0320
185	0.0258	0.0090	0.0167
186	0.0275	0.0096	0.0178
187	0.0318	0.0111	0.0207
188	0.0348	0.0122	0.0226
189	0.0432	0.0151	0.0281
190	0.0498	0.0174	0.0324
191	0.0755	0.0264	0.0491
192	0.1096	0.0336	0.0760
193	0.4744	0.0336	0.4407
194	0.0595	0.0208	0.0386
195	0.0384	0.0134	0.0250
196	0.0294	0.0103	0.0191
197	0.0508	0.0178	0.0330
198	0.0468	0.0164	0.0304
199	0.0437	0.0153	0.0284
200	0.0413	0.0144	0.0268
201	0.0393	0.0137	0.0255
202	0.0376	0.0131	0.0244
203	0.0361	0.0126	0.0235
204	0.0348	0.0122	0.0227
205	0.0337	0.0118	0.0219
206	0.0327	0.0114	0.0213
207	0.0318	0.0111	0.0207
208	0.0310	0.0108	0.0201
209	0.0302	0.0106	0.0197
210	0.0296	0.0103	0.0192
211	0.0289	0.0101	0.0188
212	0.0283	0.0099	0.0184
213	0.0278	0.0097	0.0181
214	0.0273	0.0095	0.0177
215	0.0268	0.0094	0.0174
216	0.0264	0.0092	0.0171
217	0.0266	0.0093	0.0173
218	0.0262	0.0092	0.0170
219	0.0258	0.0090	0.0168

220	0.0255	0.0089	0.0166
221	0.0251	0.0088	0.0163
222	0.0248	0.0087	0.0161
223	0.0245	0.0086	0.0159
224	0.0242	0.0085	0.0157
225	0.0239	0.0084	0.0156
226	0.0237	0.0083	0.0154
227	0.0234	0.0082	0.0152
228	0.0232	0.0081	0.0151
229	0.0229	0.0080	0.0149
230	0.0227	0.0079	0.0148
231	0.0225	0.0079	0.0146
232	0.0223	0.0078	0.0145
233	0.0221	0.0077	0.0144
234	0.0219	0.0077	0.0142
235	0.0217	0.0076	0.0141
236	0.0215	0.0075	0.0140
237	0.0213	0.0075	0.0139
238	0.0211	0.0074	0.0137
239	0.0210	0.0073	0.0136
240	0.0208	0.0073	0.0135
241	0.0207	0.0072	0.0134
242	0.0205	0.0072	0.0133
243	0.0204	0.0071	0.0132
244	0.0202	0.0071	0.0131
245	0.0201	0.0070	0.0130
246	0.0199	0.0070	0.0130
247	0.0198	0.0069	0.0129
248	0.0197	0.0069	0.0128
249	0.0195	0.0068	0.0127
250	0.0194	0.0068	0.0126
251	0.0193	0.0067	0.0125
252	0.0192	0.0067	0.0125
253	0.0190	0.0067	0.0124
254	0.0189	0.0066	0.0123
255	0.0188	0.0066	0.0122
256	0.0187	0.0065	0.0122
257	0.0186	0.0065	0.0121
258	0.0185	0.0065	0.0120
259	0.0184	0.0064	0.0120
260	0.0183	0.0064	0.0119
261	0.0182	0.0064	0.0118
262	0.0181	0.0063	0.0118
263	0.0180	0.0063	0.0117
264	0.0179	0.0063	0.0116
265	0.0178	0.0062	0.0116
266	0.0177	0.0062	0.0115
267	0.0176	0.0062	0.0115
268	0.0175	0.0061	0.0114
269	0.0175	0.0061	0.0114
270	0.0174	0.0061	0.0113
271	0.0173	0.0061	0.0112
272	0.0172	0.0060	0.0112
273	0.0171	0.0060	0.0111
274	0.0171	0.0060	0.0111
275	0.0170	0.0059	0.0110
276	0.0169	0.0059	0.0110
277	0.0168	0.0059	0.0109
278	0.0168	0.0059	0.0109
279	0.0167	0.0058	0.0109
280	0.0166	0.0058	0.0108
281	0.0166	0.0058	0.0108
282	0.0165	0.0058	0.0107
283	0.0164	0.0057	0.0107
284	0.0164	0.0057	0.0106
285	0.0163	0.0057	0.0106
286	0.0162	0.0057	0.0105
287	0.0162	0.0057	0.0105
288	0.0161	0.0056	0.0105

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      Total soil rain loss =      2.41(In)
      Total effective rainfall =      4.88(In)
      Peak flow rate in flood hydrograph =     15.82(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0004      0.05  Q         |         |         |         |
   0+10       0.0028      0.36  Q         |         |         |         |
   0+15       0.0071      0.63  VQ        |         |         |         |
   0+20       0.0122      0.73  VQ        |         |         |         |
   0+25       0.0176      0.79  VQ        |         |         |         |
   0+30       0.0232      0.82  VQ        |         |         |         |
   0+35       0.0290      0.84  VQ        |         |         |         |
   0+40       0.0348      0.84  VQ        |         |         |         |
   0+45       0.0407      0.85  VQ        |         |         |         |
   0+50       0.0466      0.86  VQ        |         |         |         |
   0+55       0.0525      0.86  VQ        |         |         |         |
   1+ 0       0.0584      0.86  VQ        |         |         |         |
   1+ 5       0.0644      0.86  VQ        |         |         |         |
   1+10       0.0703      0.87  |Q        |         |         |         |
   1+15       0.0763      0.87  |Q        |         |         |         |
   1+20       0.0823      0.87  |Q        |         |         |         |
   1+25       0.0883      0.87  |Q        |         |         |         |
   1+30       0.0943      0.87  |Q        |         |         |         |
   1+35       0.1003      0.87  |Q        |         |         |         |
   1+40       0.1063      0.88  |Q        |         |         |         |
   1+45       0.1124      0.88  |Q        |         |         |         |
   1+50       0.1184      0.88  |Q        |         |         |         |
   1+55       0.1245      0.88  |Q        |         |         |         |
   2+ 0       0.1306      0.88  |Q        |         |         |         |
   2+ 5       0.1367      0.89  |QV       |         |         |         |
   2+10       0.1428      0.89  |QV       |         |         |         |
   2+15       0.1489      0.89  |QV       |         |         |         |
   2+20       0.1551      0.89  |QV       |         |         |         |
   2+25       0.1612      0.89  |QV       |         |         |         |
   2+30       0.1674      0.89  |QV       |         |         |         |
   2+35       0.1735      0.90  |QV       |         |         |         |
   2+40       0.1797      0.90  |QV       |         |         |         |
   2+45       0.1859      0.90  |QV       |         |         |         |
   2+50       0.1922      0.90  |QV       |         |         |         |
   2+55       0.1984      0.91  |QV       |         |         |         |
   3+ 0       0.2046      0.91  |Q V      |         |         |         |
   3+ 5       0.2109      0.91  |Q V      |         |         |         |
   3+10       0.2172      0.91  |Q V      |         |         |         |
   3+15       0.2235      0.91  |Q V      |         |         |         |
   3+20       0.2298      0.92  |Q V      |         |         |         |
   3+25       0.2361      0.92  |Q V      |         |         |         |
   3+30       0.2424      0.92  |Q V      |         |         |         |
   3+35       0.2488      0.92  |Q V      |         |         |         |
   3+40       0.2552      0.92  |Q V      |         |         |         |
   3+45       0.2615      0.93  |Q V      |         |         |         |
   3+50       0.2679      0.93  |Q V      |         |         |         |
   3+55       0.2744      0.93  |Q  V     |         |         |         |
   4+ 0       0.2808      0.93  |Q  V     |         |         |         |
   4+ 5       0.2872      0.94  |Q  V     |         |         |         |
   4+10       0.2937      0.94  |Q  V     |         |         |         |
   4+15       0.3002      0.94  |Q  V     |         |         |         |
   4+20       0.3067      0.94  |Q  V     |         |         |         |
   4+25       0.3132      0.95  |Q  V     |         |         |         |
   4+30       0.3197      0.95  |Q  V     |         |         |         |
   4+35       0.3263      0.95  |Q  V     |         |         |         |
   4+40       0.3328      0.95  |Q  V     |         |         |         |
   4+45       0.3394      0.96  |Q  V     |         |         |         |
   4+50       0.3460      0.96  |Q   V    |         |         |         |
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 4+55      0.3526      0.96  |Q   V    |          |          |          |
 5+ 0      0.3592      0.96  |Q   V    |          |          |          |
 5+ 5      0.3659      0.97  |Q   V    |          |          |          |
 5+10      0.3726      0.97  |Q   V    |          |          |          |
 5+15      0.3793      0.97  |Q   V    |          |          |          |
 5+20      0.3860      0.97  |Q   V    |          |          |          |
 5+25      0.3927      0.98  |Q   V    |          |          |          |
 5+30      0.3994      0.98  |Q   V    |          |          |          |
 5+35      0.4062      0.98  |Q   V    |          |          |          |
 5+40      0.4130      0.99  |Q    V   |          |          |          |
 5+45      0.4198      0.99  |Q    V   |          |          |          |
 5+50      0.4266      0.99  |Q    V   |          |          |          |
 5+55      0.4335      0.99  |Q    V   |          |          |          |
 6+ 0      0.4403      1.00  |Q    V   |          |          |          |
 6+ 5      0.4472      1.00  |Q    V   |          |          |          |
 6+10      0.4541      1.00  | Q   V   |          |          |          |
 6+15      0.4610      1.01  | Q   V   |          |          |          |
 6+20      0.4680      1.01  | Q   V   |          |          |          |
 6+25      0.4750      1.01  | Q   V   |          |          |          |
 6+30      0.4819      1.02  | Q    V  |          |          |          |
 6+35      0.4890      1.02  | Q    V  |          |          |          |
 6+40      0.4960      1.02  | Q    V  |          |          |          |
 6+45      0.5031      1.02  | Q    V  |          |          |          |
 6+50      0.5101      1.03  | Q    V  |          |          |          |
 6+55      0.5172      1.03  | Q    V  |          |          |          |
 7+ 0      0.5244      1.03  | Q    V  |          |          |          |
 7+ 5      0.5315      1.04  | Q    V  |          |          |          |
 7+10      0.5387      1.04  | Q    V  |          |          |          |
 7+15      0.5459      1.05  | Q     V |          |          |          |
 7+20      0.5531      1.05  | Q     V |          |          |          |
 7+25      0.5604      1.05  | Q     V |          |          |          |
 7+30      0.5676      1.06  | Q     V |          |          |          |
 7+35      0.5749      1.06  | Q     V |          |          |          |
 7+40      0.5823      1.06  | Q     V |          |          |          |
 7+45      0.5896      1.07  | Q     V |          |          |          |
 7+50      0.5970      1.07  | Q     V |          |          |          |
 7+55      0.6044      1.08  | Q     V |          |          |          |
 8+ 0      0.6118      1.08  | Q     V |          |          |          |
 8+ 5      0.6193      1.08  | Q      V|          |          |          |
 8+10      0.6268      1.09  | Q      V|          |          |          |
 8+15      0.6343      1.09  | Q      V|          |          |          |
 8+20      0.6418      1.10  | Q      V|          |          |          |
 8+25      0.6494      1.10  | Q      V|          |          |          |
 8+30      0.6570      1.10  | Q      V|          |          |          |
 8+35      0.6647      1.11  | Q      V|          |          |          |
 8+40      0.6723      1.11  | Q      V|          |          |          |
 8+45      0.6800      1.12  | Q      V|          |          |          |
 8+50      0.6878      1.12  | Q       V          |          |          |
 8+55      0.6955      1.13  | Q       V          |          |          |
 9+ 0      0.7033      1.13  | Q       V          |          |          |
 9+ 5      0.7111      1.14  | Q       V          |          |          |
 9+10      0.7190      1.14  | Q       V          |          |          |
 9+15      0.7269      1.15  | Q       V          |          |          |
 9+20      0.7348      1.15  | Q       V          |          |          |
 9+25      0.7428      1.16  | Q       V          |          |          |
 9+30      0.7508      1.16  | Q        |V         |          |          |
 9+35      0.7588      1.17  | Q        |V         |          |          |
 9+40      0.7669      1.17  | Q        |V         |          |          |
 9+45      0.7750      1.18  | Q        |V         |          |          |
 9+50      0.7832      1.18  | Q        |V         |          |          |
 9+55      0.7913      1.19  | Q        |V         |          |          |
10+ 0      0.7996      1.20  | Q        |V         |          |          |
10+ 5      0.8078      1.20  | Q        |V         |          |          |
10+10      0.8162      1.21  | Q        |V         |          |          |
10+15      0.8245      1.21  | Q        | V        |          |          |
10+20      0.8329      1.22  | Q        | V        |          |          |
10+25      0.8414      1.23  | Q        | V        |          |          |
10+30      0.8498      1.23  | Q        | V        |          |          |
10+35      0.8584      1.24  | Q        | V        |          |          |
10+40      0.8669      1.25  | Q        | V        |          |          |
10+45      0.8756      1.25  | Q        | V        |          |          |
```

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10+50       0.8842      1.26  | Q       | V       |         |         |
10+55       0.8930      1.27  | Q       |  V      |         |         |
11+ 0       0.9017      1.27  | Q       |  V      |         |         |
11+ 5       0.9106      1.28  | Q       |  V      |         |         |
11+10       0.9194      1.29  | Q       |  V      |         |         |
11+15       0.9284      1.30  | Q       |  V      |         |         |
11+20       0.9374      1.31  | Q       |  V      |         |         |
11+25       0.9464      1.31  | Q       |  V      |         |         |
11+30       0.9555      1.32  | Q       |   V     |         |         |
11+35       0.9647      1.33  | Q       |   V     |         |         |
11+40       0.9739      1.34  | Q       |   V     |         |         |
11+45       0.9832      1.35  | Q       |   V     |         |         |
11+50       0.9925      1.36  | Q       |   V     |         |         |
11+55       1.0019      1.37  | Q       |   V     |         |         |
12+ 0       1.0114      1.38  | Q       |   V     |         |         |
12+ 5       1.0210      1.38  | Q       |   V     |         |         |
12+10       1.0305      1.38  | Q       |    V    |         |         |
12+15       1.0400      1.38  | Q       |    V    |         |         |
12+20       1.0496      1.39  | Q       |    V    |         |         |
12+25       1.0592      1.40  | Q       |    V    |         |         |
12+30       1.0689      1.41  | Q       |    V    |         |         |
12+35       1.0787      1.42  | Q       |    V    |         |         |
12+40       1.0886      1.43  | Q       |    V    |         |         |
12+45       1.0985      1.45  | Q       |     V   |         |         |
12+50       1.1086      1.46  | Q       |     V   |         |         |
12+55       1.1187      1.47  | Q       |     V   |         |         |
13+ 0       1.1290      1.49  | Q       |     V   |         |         |
13+ 5       1.1393      1.50  |  Q      |     V   |         |         |
13+10       1.1498      1.52  |  Q      |     V   |         |         |
13+15       1.1603      1.53  |  Q      |      V  |         |         |
13+20       1.1710      1.55  |  Q      |      V  |         |         |
13+25       1.1818      1.57  |  Q      |      V  |         |         |
13+30       1.1927      1.59  |  Q      |      V  |         |         |
13+35       1.2038      1.60  |  Q      |      V  |         |         |
13+40       1.2150      1.62  |  Q      |      V  |         |         |
13+45       1.2263      1.64  |  Q      |      V  |         |         |
13+50       1.2378      1.67  |  Q      |       V |         |         |
13+55       1.2494      1.69  |  Q      |       V |         |         |
14+ 0       1.2612      1.71  |  Q      |       V |         |         |
14+ 5       1.2732      1.74  |  Q      |       V |         |         |
14+10       1.2853      1.76  |  Q      |       V |         |         |
14+15       1.2977      1.79  |  Q      |        V|         |         |
14+20       1.3102      1.82  |  Q      |        V|         |         |
14+25       1.3230      1.85  |  Q      |        V|         |         |
14+30       1.3360      1.89  |  Q      |        V|         |         |
14+35       1.3492      1.92  |  Q      |        V|         |         |
14+40       1.3628      1.96  |  Q      |        V|         |         |
14+45       1.3765      2.00  |   Q     |         V         |         |
14+50       1.3907      2.05  |   Q     |         V         |         |
14+55       1.4051      2.10  |   Q     |         V         |         |
15+ 0       1.4199      2.15  |   Q     |         V         |         |
15+ 5       1.4351      2.21  |   Q     |         |V        |         |
15+10       1.4508      2.27  |   Q     |         |V        |         |
15+15       1.4669      2.34  |   Q     |         |V        |         |
15+20       1.4837      2.43  |   Q     |         |V        |         |
15+25       1.5004      2.43  |   Q     |         | V       |         |
15+30       1.5144      2.04  |   Q     |         | V       |         |
15+35       1.5262      1.71  |  Q      |         | V       |         |
15+40       1.5379      1.70  |  Q      |         | V       |         |
15+45       1.5502      1.79  |  Q      |         | V       |         |
15+50       1.5640      2.01  |   Q     |         | V       |         |
15+55       1.5804      2.37  |   Q     |         |  V      |         |
16+ 0       1.6022      3.17  |     Q   |         |  V      |         |
16+ 5       1.6457      6.31  |         | Q       |   V     |         |
16+10       1.7546     15.82  |         |         |    V    |Q        |
16+15       1.8498     13.81  |         |         |      Q  |         |
16+20       1.8957      6.67  |         |  Q      |      V  |         |
16+25       1.9265      4.47  |       Q |         |       V |         |
16+30       1.9513      3.60  |      Q  |         |       V |         |
16+35       1.9723      3.05  |     Q   |         |       V |         |
16+40       1.9903      2.62  |    Q    |         |        V|         |
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16+45       2.0071      2.44  |   Q     |         |        V|         |
16+50       2.0231      2.33  |   Q     |         |        V|         |
16+55       2.0381      2.17  |   Q     |         |        V|         |
17+ 0       2.0519      2.00  |  Q      |         |         V         |
17+ 5       2.0651      1.92  |  Q      |         |         V         |
17+10       2.0778      1.85  |  Q      |         |         V         |
17+15       2.0902      1.79  |  Q      |         |         V         |
17+20       2.1021      1.74  |  Q      |         |         V         |
17+25       2.1138      1.69  |  Q      |         |         |V        |
17+30       2.1251      1.64  |  Q      |         |         |V        |
17+35       2.1361      1.60  |  Q      |         |         |V        |
17+40       2.1469      1.57  |  Q      |         |         |V        |
17+45       2.1574      1.53  |  Q      |         |         |V        |
17+50       2.1678      1.50  |  Q      |         |         |V        |
17+55       2.1779      1.47  | Q       |         |         |V        |
18+ 0       2.1879      1.44  | Q       |         |         | V       |
18+ 5       2.1976      1.42  | Q       |         |         | V       |
18+10       2.2073      1.41  | Q       |         |         | V       |
18+15       2.2170      1.40  | Q       |         |         | V       |
18+20       2.2265      1.38  | Q       |         |         | V       |
18+25       2.2358      1.36  | Q       |         |         | V       |
18+30       2.2451      1.35  | Q       |         |         | V       |
18+35       2.2543      1.33  | Q       |         |         |  V      |
18+40       2.2633      1.31  | Q       |         |         |  V      |
18+45       2.2722      1.30  | Q       |         |         |  V      |
18+50       2.2810      1.28  | Q       |         |         |  V      |
18+55       2.2897      1.27  | Q       |         |         |  V      |
19+ 0       2.2983      1.25  | Q       |         |         |  V      |
19+ 5       2.3069      1.24  | Q       |         |         |  V      |
19+10       2.3153      1.22  | Q       |         |         |  V      |
19+15       2.3236      1.21  | Q       |         |         |   V     |
19+20       2.3319      1.20  | Q       |         |         |   V     |
19+25       2.3401      1.19  | Q       |         |         |   V     |
19+30       2.3482      1.18  | Q       |         |         |   V     |
19+35       2.3562      1.17  | Q       |         |         |   V     |
19+40       2.3642      1.16  | Q       |         |         |   V     |
19+45       2.3721      1.15  | Q       |         |         |   V     |
19+50       2.3799      1.14  | Q       |         |         |   V     |
19+55       2.3876      1.13  | Q       |         |         |    V    |
20+ 0       2.3953      1.12  | Q       |         |         |    V    |
20+ 5       2.4030      1.11  | Q       |         |         |    V    |
20+10       2.4105      1.10  | Q       |         |         |    V    |
20+15       2.4180      1.09  | Q       |         |         |    V    |
20+20       2.4255      1.08  | Q       |         |         |    V    |
20+25       2.4329      1.07  | Q       |         |         |    V    |
20+30       2.4402      1.07  | Q       |         |         |    V    |
20+35       2.4475      1.06  | Q       |         |         |    V    |
20+40       2.4548      1.05  | Q       |         |         |     V   |
20+45       2.4620      1.04  | Q       |         |         |     V   |
20+50       2.4691      1.04  | Q       |         |         |     V   |
20+55       2.4762      1.03  | Q       |         |         |     V   |
21+ 0       2.4833      1.02  | Q       |         |         |     V   |
21+ 5       2.4903      1.02  | Q       |         |         |     V   |
21+10       2.4972      1.01  | Q       |         |         |     V   |
21+15       2.5042      1.01  | Q       |         |         |     V   |
21+20       2.5110      1.00  |Q        |         |         |     V   |
21+25       2.5179      0.99  |Q        |         |         |     V   |
21+30       2.5247      0.99  |Q        |         |         |      V  |
21+35       2.5314      0.98  |Q        |         |         |      V  |
21+40       2.5382      0.98  |Q        |         |         |      V  |
21+45       2.5448      0.97  |Q        |         |         |      V  |
21+50       2.5515      0.97  |Q        |         |         |      V  |
21+55       2.5581      0.96  |Q        |         |         |      V  |
22+ 0       2.5647      0.95  |Q        |         |         |      V  |
22+ 5       2.5712      0.95  |Q        |         |         |      V  |
22+10       2.5777      0.94  |Q        |         |         |      V  |
22+15       2.5842      0.94  |Q        |         |         |      V  |
22+20       2.5906      0.94  |Q        |         |         |       V |
22+25       2.5971      0.93  |Q        |         |         |       V |
22+30       2.6034      0.93  |Q        |         |         |       V |
22+35       2.6098      0.92  |Q        |         |         |       V |
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   22+40       2.6161      0.92  |Q        |         |         |       V |
   22+45       2.6224      0.91  |Q        |         |         |       V |
   22+50       2.6286      0.91  |Q        |         |         |       V |
   22+55       2.6349      0.90  |Q        |         |         |       V |
   23+ 0       2.6411      0.90  |Q        |         |         |       V |
   23+ 5       2.6472      0.90  |Q        |         |         |       V |
   23+10       2.6534      0.89  |Q        |         |         |       V |
   23+15       2.6595      0.89  |Q        |         |         |        V|
   23+20       2.6656      0.88  |Q        |         |         |        V|
   23+25       2.6717      0.88  |Q        |         |         |        V|
   23+30       2.6777      0.88  |Q        |         |         |        V|
   23+35       2.6837      0.87  |Q        |         |         |        V|
   23+40       2.6897      0.87  |Q        |         |         |        V|
   23+45       2.6957      0.87  |Q        |         |         |        V|
   23+50       2.7016      0.86  |Q        |         |         |        V|
   23+55       2.7076      0.86  |Q        |         |         |        V|
   24+ 0       2.7134      0.86  |Q        |         |         |        V|
   24+ 5       2.7190      0.80  |Q        |         |         |        V|
   24+10       2.7224      0.49  Q         |         |         |        V|
   24+15       2.7239      0.22  Q         |         |         |        V|
   24+20       2.7247      0.12  Q         |         |         |        V|
   24+25       2.7252      0.06  Q         |         |         |        V|
   24+30       2.7254      0.03  Q         |         |         |        V|
   24+35       2.7255      0.02  Q         |         |         |        V|
   24+40       2.7256      0.01  Q         |         |         |        V|
   24+45       2.7256      0.01  Q         |         |         |        V|
   24+50       2.7256      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

Area ‘F’ – 25 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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               Study date  11/11/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'F'
25 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.71           1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.71           6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
             6.71          24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
             6.71           1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.71           6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
             6.71          24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      78.0          6.71      1.000     0.404    1.000    0.404

Area-averaged adjusted loss rate Fm (In/Hr) =  0.404

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
6.71	1.000	78.0	78.0	2.82	0.707

Area-averaged catchment yield fraction, Y = 0.707
Area-averaged low loss fraction, Yb = 0.293
User entry of time of concentration = 0.162 (hours)
++
Watershed area = 6.71(Ac.)
Catchment Lag time = 0.130 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 64.3004
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.404(In/Hr)
Average low loss rate fraction (Yb) = 0.293 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 6.71(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.569(In)
30-minute factor = 1.000 Adjusted rainfall = 0.974(In)
1-hour factor = 1.000 Adjusted rainfall = 1.199(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 81.15 (CFS))	
1	6.228	5.054
2	42.193	29.185
3	74.058	25.858
4	85.789	9.519
5	92.451	5.407
6	96.283	3.110
7	98.090	1.467
8	98.816	0.589
9	99.292	0.386
10	99.729	0.355
11	100.000	0.220

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5687	0.5687
2	0.7002	0.1315
3	0.7908	0.0906
4	0.8621	0.0713
5	0.9217	0.0597
6	0.9736	0.0518
7	1.0196	0.0461
8	1.0613	0.0417
9	1.0995	0.0382
10	1.1348	0.0353
11	1.1677	0.0329
12	1.1986	0.0309
13	1.2592	0.0606
14	1.3180	0.0588
15	1.3752	0.0572

16	1.4310	0.0558
17	1.4855	0.0545
18	1.5387	0.0532
19	1.5908	0.0521
20	1.6419	0.0511
21	1.6920	0.0501
22	1.7412	0.0492
23	1.7895	0.0483
24	1.8371	0.0475
25	1.8838	0.0468
26	1.9299	0.0461
27	1.9753	0.0454
28	2.0201	0.0448
29	2.0642	0.0441
30	2.1078	0.0436
31	2.1508	0.0430
32	2.1933	0.0425
33	2.2352	0.0420
34	2.2767	0.0415
35	2.3178	0.0410
36	2.3583	0.0406
37	2.3985	0.0401
38	2.4382	0.0397
39	2.4775	0.0393
40	2.5164	0.0389
41	2.5550	0.0386
42	2.5932	0.0382
43	2.6310	0.0379
44	2.6685	0.0375
45	2.7057	0.0372
46	2.7426	0.0369
47	2.7792	0.0366
48	2.8154	0.0363
49	2.8514	0.0360
50	2.8871	0.0357
51	2.9225	0.0354
52	2.9577	0.0352
53	2.9926	0.0349
54	3.0272	0.0346
55	3.0616	0.0344
56	3.0958	0.0342
57	3.1297	0.0339
58	3.1634	0.0337
59	3.1969	0.0335
60	3.2302	0.0333
61	3.2632	0.0330
62	3.2961	0.0328
63	3.3287	0.0326
64	3.3611	0.0324
65	3.3934	0.0322
66	3.4254	0.0321
67	3.4573	0.0319
68	3.4890	0.0317
69	3.5205	0.0315
70	3.5518	0.0313
71	3.5830	0.0312
72	3.6140	0.0310
73	3.6476	0.0336
74	3.6811	0.0335
75	3.7144	0.0333
76	3.7476	0.0332
77	3.7806	0.0330
78	3.8135	0.0329
79	3.8462	0.0328
80	3.8789	0.0326
81	3.9113	0.0325
82	3.9437	0.0323
83	3.9759	0.0322
84	4.0080	0.0321
85	4.0400	0.0320
86	4.0718	0.0318

87	4.1035	0.0317
88	4.1351	0.0316
89	4.1666	0.0315
90	4.1980	0.0314
91	4.2292	0.0313
92	4.2604	0.0311
93	4.2914	0.0310
94	4.3223	0.0309
95	4.3531	0.0308
96	4.3839	0.0307
97	4.4145	0.0306
98	4.4450	0.0305
99	4.4753	0.0304
100	4.5056	0.0303
101	4.5358	0.0302
102	4.5659	0.0301
103	4.5959	0.0300
104	4.6258	0.0299
105	4.6557	0.0298
106	4.6854	0.0297
107	4.7150	0.0296
108	4.7445	0.0295
109	4.7740	0.0294
110	4.8033	0.0294
111	4.8326	0.0293
112	4.8618	0.0292
113	4.8909	0.0291
114	4.9199	0.0290
115	4.9488	0.0289
116	4.9777	0.0288
117	5.0064	0.0288
118	5.0351	0.0287
119	5.0637	0.0286
120	5.0922	0.0285
121	5.1207	0.0284
122	5.1491	0.0284
123	5.1773	0.0283
124	5.2056	0.0282
125	5.2337	0.0281
126	5.2618	0.0281
127	5.2898	0.0280
128	5.3177	0.0279
129	5.3455	0.0279
130	5.3733	0.0278
131	5.4010	0.0277
132	5.4287	0.0276
133	5.4562	0.0276
134	5.4838	0.0275
135	5.5112	0.0274
136	5.5386	0.0274
137	5.5659	0.0273
138	5.5931	0.0272
139	5.6203	0.0272
140	5.6474	0.0271
141	5.6744	0.0270
142	5.7014	0.0270
143	5.7283	0.0269
144	5.7552	0.0269
145	5.7820	0.0268
146	5.8087	0.0267
147	5.8354	0.0267
148	5.8620	0.0266
149	5.8886	0.0266
150	5.9151	0.0265
151	5.9415	0.0264
152	5.9679	0.0264
153	5.9942	0.0263
154	6.0205	0.0263
155	6.0467	0.0262
156	6.0729	0.0262
157	6.0990	0.0261

158	6.1250	0.0260
159	6.1510	0.0260
160	6.1770	0.0259
161	6.2029	0.0259
162	6.2287	0.0258
163	6.2545	0.0258
164	6.2802	0.0257
165	6.3059	0.0257
166	6.3315	0.0256
167	6.3571	0.0256
168	6.3826	0.0255
169	6.4081	0.0255
170	6.4335	0.0254
171	6.4589	0.0254
172	6.4842	0.0253
173	6.5095	0.0253
174	6.5348	0.0252
175	6.5599	0.0252
176	6.5851	0.0251
177	6.6102	0.0251
178	6.6352	0.0250
179	6.6602	0.0250
180	6.6852	0.0250
181	6.7101	0.0249
182	6.7349	0.0249
183	6.7598	0.0248
184	6.7845	0.0248
185	6.8093	0.0247
186	6.8339	0.0247
187	6.8586	0.0246
188	6.8832	0.0246
189	6.9077	0.0246
190	6.9323	0.0245
191	6.9567	0.0245
192	6.9812	0.0244
193	7.0055	0.0244
194	7.0299	0.0243
195	7.0542	0.0243
196	7.0785	0.0243
197	7.1027	0.0242
198	7.1269	0.0242
199	7.1510	0.0241
200	7.1751	0.0241
201	7.1992	0.0241
202	7.2232	0.0240
203	7.2472	0.0240
204	7.2711	0.0239
205	7.2950	0.0239
206	7.3189	0.0239
207	7.3427	0.0238
208	7.3665	0.0238
209	7.3903	0.0238
210	7.4140	0.0237
211	7.4377	0.0237
212	7.4613	0.0236
213	7.4849	0.0236
214	7.5085	0.0236
215	7.5320	0.0235
216	7.5555	0.0235
217	7.5790	0.0235
218	7.6024	0.0234
219	7.6258	0.0234
220	7.6492	0.0234
221	7.6725	0.0233
222	7.6958	0.0233
223	7.7190	0.0233
224	7.7422	0.0232
225	7.7654	0.0232
226	7.7886	0.0232
227	7.8117	0.0231
228	7.8348	0.0231

229	7.8578	0.0231
230	7.8808	0.0230
231	7.9038	0.0230
232	7.9268	0.0230
233	7.9497	0.0229
234	7.9726	0.0229
235	7.9954	0.0229
236	8.0183	0.0228
237	8.0411	0.0228
238	8.0638	0.0228
239	8.0865	0.0227
240	8.1092	0.0227
241	8.1319	0.0227
242	8.1545	0.0226
243	8.1771	0.0226
244	8.1997	0.0226
245	8.2223	0.0225
246	8.2448	0.0225
247	8.2673	0.0225
248	8.2897	0.0225
249	8.3121	0.0224
250	8.3345	0.0224
251	8.3569	0.0224
252	8.3792	0.0223
253	8.4015	0.0223
254	8.4238	0.0223
255	8.4460	0.0222
256	8.4683	0.0222
257	8.4905	0.0222
258	8.5126	0.0222
259	8.5348	0.0221
260	8.5569	0.0221
261	8.5789	0.0221
262	8.6010	0.0221
263	8.6230	0.0220
264	8.6450	0.0220
265	8.6670	0.0220
266	8.6889	0.0219
267	8.7108	0.0219
268	8.7327	0.0219
269	8.7546	0.0219
270	8.7764	0.0218
271	8.7982	0.0218
272	8.8200	0.0218
273	8.8417	0.0218
274	8.8635	0.0217
275	8.8852	0.0217
276	8.9069	0.0217
277	8.9285	0.0216
278	8.9501	0.0216
279	8.9717	0.0216
280	8.9933	0.0216
281	9.0148	0.0215
282	9.0364	0.0215
283	9.0579	0.0215
284	9.0793	0.0215
285	9.1008	0.0214
286	9.1222	0.0214
287	9.1436	0.0214
288	9.1650	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0063	0.0151
2	0.0214	0.0063	0.0151
3	0.0214	0.0063	0.0152
4	0.0215	0.0063	0.0152
5	0.0215	0.0063	0.0152
6	0.0215	0.0063	0.0152

7	0.0216	0.0063	0.0153
8	0.0216	0.0063	0.0153
9	0.0217	0.0064	0.0153
10	0.0217	0.0064	0.0153
11	0.0218	0.0064	0.0154
12	0.0218	0.0064	0.0154
13	0.0218	0.0064	0.0154
14	0.0219	0.0064	0.0154
15	0.0219	0.0064	0.0155
16	0.0219	0.0064	0.0155
17	0.0220	0.0065	0.0155
18	0.0220	0.0065	0.0156
19	0.0221	0.0065	0.0156
20	0.0221	0.0065	0.0156
21	0.0222	0.0065	0.0157
22	0.0222	0.0065	0.0157
23	0.0222	0.0065	0.0157
24	0.0223	0.0065	0.0157
25	0.0223	0.0066	0.0158
26	0.0224	0.0066	0.0158
27	0.0224	0.0066	0.0158
28	0.0225	0.0066	0.0159
29	0.0225	0.0066	0.0159
30	0.0225	0.0066	0.0159
31	0.0226	0.0066	0.0160
32	0.0226	0.0066	0.0160
33	0.0227	0.0067	0.0160
34	0.0227	0.0067	0.0161
35	0.0228	0.0067	0.0161
36	0.0228	0.0067	0.0161
37	0.0229	0.0067	0.0162
38	0.0229	0.0067	0.0162
39	0.0230	0.0067	0.0162
40	0.0230	0.0068	0.0163
41	0.0231	0.0068	0.0163
42	0.0231	0.0068	0.0163
43	0.0232	0.0068	0.0164
44	0.0232	0.0068	0.0164
45	0.0233	0.0068	0.0165
46	0.0233	0.0068	0.0165
47	0.0234	0.0069	0.0165
48	0.0234	0.0069	0.0166
49	0.0235	0.0069	0.0166
50	0.0235	0.0069	0.0166
51	0.0236	0.0069	0.0167
52	0.0236	0.0069	0.0167
53	0.0237	0.0070	0.0168
54	0.0238	0.0070	0.0168
55	0.0238	0.0070	0.0168
56	0.0239	0.0070	0.0169
57	0.0239	0.0070	0.0169
58	0.0240	0.0070	0.0169
59	0.0241	0.0071	0.0170
60	0.0241	0.0071	0.0170
61	0.0242	0.0071	0.0171
62	0.0242	0.0071	0.0171
63	0.0243	0.0071	0.0172
64	0.0243	0.0071	0.0172
65	0.0244	0.0072	0.0173
66	0.0245	0.0072	0.0173
67	0.0246	0.0072	0.0174
68	0.0246	0.0072	0.0174
69	0.0247	0.0072	0.0174
70	0.0247	0.0073	0.0175
71	0.0248	0.0073	0.0175
72	0.0249	0.0073	0.0176
73	0.0250	0.0073	0.0176
74	0.0250	0.0073	0.0177
75	0.0251	0.0074	0.0177
76	0.0251	0.0074	0.0178
77	0.0252	0.0074	0.0178

78	0.0253	0.0074	0.0179
79	0.0254	0.0074	0.0179
80	0.0254	0.0075	0.0180
81	0.0255	0.0075	0.0180
82	0.0256	0.0075	0.0181
83	0.0257	0.0075	0.0181
84	0.0257	0.0075	0.0182
85	0.0258	0.0076	0.0183
86	0.0259	0.0076	0.0183
87	0.0260	0.0076	0.0184
88	0.0260	0.0076	0.0184
89	0.0262	0.0077	0.0185
90	0.0262	0.0077	0.0185
91	0.0263	0.0077	0.0186
92	0.0264	0.0077	0.0186
93	0.0265	0.0078	0.0187
94	0.0266	0.0078	0.0188
95	0.0267	0.0078	0.0189
96	0.0267	0.0078	0.0189
97	0.0269	0.0079	0.0190
98	0.0269	0.0079	0.0190
99	0.0270	0.0079	0.0191
100	0.0271	0.0080	0.0192
101	0.0272	0.0080	0.0192
102	0.0273	0.0080	0.0193
103	0.0274	0.0080	0.0194
104	0.0275	0.0081	0.0194
105	0.0276	0.0081	0.0195
106	0.0277	0.0081	0.0196
107	0.0279	0.0082	0.0197
108	0.0279	0.0082	0.0197
109	0.0281	0.0082	0.0198
110	0.0281	0.0083	0.0199
111	0.0283	0.0083	0.0200
112	0.0284	0.0083	0.0200
113	0.0285	0.0084	0.0202
114	0.0286	0.0084	0.0202
115	0.0288	0.0084	0.0203
116	0.0288	0.0085	0.0204
117	0.0290	0.0085	0.0205
118	0.0291	0.0085	0.0206
119	0.0293	0.0086	0.0207
120	0.0294	0.0086	0.0207
121	0.0295	0.0087	0.0209
122	0.0296	0.0087	0.0209
123	0.0298	0.0087	0.0211
124	0.0299	0.0088	0.0211
125	0.0301	0.0088	0.0213
126	0.0302	0.0089	0.0213
127	0.0304	0.0089	0.0215
128	0.0305	0.0089	0.0216
129	0.0307	0.0090	0.0217
130	0.0308	0.0090	0.0218
131	0.0310	0.0091	0.0219
132	0.0311	0.0091	0.0220
133	0.0314	0.0092	0.0222
134	0.0315	0.0092	0.0223
135	0.0317	0.0093	0.0224
136	0.0318	0.0093	0.0225
137	0.0321	0.0094	0.0227
138	0.0322	0.0094	0.0228
139	0.0325	0.0095	0.0230
140	0.0326	0.0096	0.0230
141	0.0329	0.0096	0.0232
142	0.0330	0.0097	0.0233
143	0.0333	0.0098	0.0235
144	0.0335	0.0098	0.0237
145	0.0310	0.0091	0.0219
146	0.0312	0.0091	0.0220
147	0.0315	0.0092	0.0223
148	0.0317	0.0093	0.0224

149	0.0321	0.0094	0.0227
150	0.0322	0.0095	0.0228
151	0.0326	0.0096	0.0231
152	0.0328	0.0096	0.0232
153	0.0333	0.0098	0.0235
154	0.0335	0.0098	0.0237
155	0.0339	0.0100	0.0240
156	0.0342	0.0100	0.0241
157	0.0346	0.0102	0.0245
158	0.0349	0.0102	0.0247
159	0.0354	0.0104	0.0250
160	0.0357	0.0105	0.0252
161	0.0363	0.0106	0.0256
162	0.0366	0.0107	0.0258
163	0.0372	0.0109	0.0263
164	0.0375	0.0110	0.0265
165	0.0382	0.0112	0.0270
166	0.0386	0.0113	0.0272
167	0.0393	0.0115	0.0278
168	0.0397	0.0116	0.0281
169	0.0406	0.0119	0.0287
170	0.0410	0.0120	0.0290
171	0.0420	0.0123	0.0297
172	0.0425	0.0125	0.0300
173	0.0436	0.0128	0.0308
174	0.0441	0.0129	0.0312
175	0.0454	0.0133	0.0321
176	0.0461	0.0135	0.0326
177	0.0475	0.0139	0.0336
178	0.0483	0.0142	0.0342
179	0.0501	0.0147	0.0354
180	0.0511	0.0150	0.0361
181	0.0532	0.0156	0.0376
182	0.0545	0.0160	0.0385
183	0.0572	0.0168	0.0404
184	0.0588	0.0173	0.0416
185	0.0309	0.0091	0.0218
186	0.0329	0.0097	0.0233
187	0.0382	0.0112	0.0270
188	0.0417	0.0122	0.0295
189	0.0518	0.0152	0.0366
190	0.0597	0.0175	0.0422
191	0.0906	0.0266	0.0640
192	0.1315	0.0336	0.0978
193	0.5687	0.0336	0.5351
194	0.0713	0.0209	0.0504
195	0.0461	0.0135	0.0326
196	0.0353	0.0104	0.0250
197	0.0606	0.0178	0.0428
198	0.0558	0.0164	0.0394
199	0.0521	0.0153	0.0368
200	0.0492	0.0144	0.0348
201	0.0468	0.0137	0.0331
202	0.0448	0.0131	0.0316
203	0.0430	0.0126	0.0304
204	0.0415	0.0122	0.0293
205	0.0401	0.0118	0.0284
206	0.0389	0.0114	0.0275
207	0.0379	0.0111	0.0267
208	0.0369	0.0108	0.0261
209	0.0360	0.0106	0.0254
210	0.0352	0.0103	0.0248
211	0.0344	0.0101	0.0243
212	0.0337	0.0099	0.0238
213	0.0330	0.0097	0.0234
214	0.0324	0.0095	0.0229
215	0.0319	0.0093	0.0225
216	0.0313	0.0092	0.0221
217	0.0336	0.0099	0.0238
218	0.0332	0.0097	0.0234
219	0.0328	0.0096	0.0231

220	0.0323	0.0095	0.0229
221	0.0320	0.0094	0.0226
222	0.0316	0.0093	0.0223
223	0.0313	0.0092	0.0221
224	0.0309	0.0091	0.0219
225	0.0306	0.0090	0.0216
226	0.0303	0.0089	0.0214
227	0.0300	0.0088	0.0212
228	0.0297	0.0087	0.0210
229	0.0294	0.0086	0.0208
230	0.0292	0.0086	0.0206
231	0.0289	0.0085	0.0204
232	0.0287	0.0084	0.0203
233	0.0284	0.0083	0.0201
234	0.0282	0.0083	0.0199
235	0.0280	0.0082	0.0198
236	0.0278	0.0081	0.0196
237	0.0276	0.0081	0.0195
238	0.0274	0.0080	0.0193
239	0.0272	0.0080	0.0192
240	0.0270	0.0079	0.0191
241	0.0268	0.0079	0.0189
242	0.0266	0.0078	0.0188
243	0.0264	0.0078	0.0187
244	0.0263	0.0077	0.0186
245	0.0261	0.0077	0.0184
246	0.0259	0.0076	0.0183
247	0.0258	0.0076	0.0182
248	0.0256	0.0075	0.0181
249	0.0255	0.0075	0.0180
250	0.0253	0.0074	0.0179
251	0.0252	0.0074	0.0178
252	0.0250	0.0073	0.0177
253	0.0249	0.0073	0.0176
254	0.0248	0.0073	0.0175
255	0.0246	0.0072	0.0174
256	0.0245	0.0072	0.0173
257	0.0244	0.0072	0.0172
258	0.0243	0.0071	0.0171
259	0.0241	0.0071	0.0171
260	0.0240	0.0070	0.0170
261	0.0239	0.0070	0.0169
262	0.0238	0.0070	0.0168
263	0.0237	0.0069	0.0167
264	0.0236	0.0069	0.0167
265	0.0235	0.0069	0.0166
266	0.0234	0.0069	0.0165
267	0.0233	0.0068	0.0164
268	0.0232	0.0068	0.0164
269	0.0231	0.0068	0.0163
270	0.0230	0.0067	0.0162
271	0.0229	0.0067	0.0162
272	0.0228	0.0067	0.0161
273	0.0227	0.0066	0.0160
274	0.0226	0.0066	0.0160
275	0.0225	0.0066	0.0159
276	0.0224	0.0066	0.0158
277	0.0223	0.0065	0.0158
278	0.0222	0.0065	0.0157
279	0.0221	0.0065	0.0156
280	0.0221	0.0065	0.0156
281	0.0220	0.0064	0.0155
282	0.0219	0.0064	0.0155
283	0.0218	0.0064	0.0154
284	0.0217	0.0064	0.0154
285	0.0216	0.0063	0.0153
286	0.0216	0.0063	0.0152
287	0.0215	0.0063	0.0152
288	0.0214	0.0063	0.0151

```
      Total soil rain loss =      2.55(In)
      Total effective rainfall =      6.62(In)
      Peak flow rate in flood hydrograph =     19.44(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0005      0.08  Q         |         |         |         |
  0+10       0.0041      0.52  VQ        |         |         |         |
  0+15       0.0103      0.91  VQ        |         |         |         |
  0+20       0.0176      1.05  V Q       |         |         |         |
  0+25       0.0254      1.14  V Q       |         |         |         |
  0+30       0.0336      1.19  V Q       |         |         |         |
  0+35       0.0419      1.21  V Q       |         |         |         |
  0+40       0.0504      1.22  V Q       |         |         |         |
  0+45       0.0588      1.23  V Q       |         |         |         |
  0+50       0.0673      1.24  V Q       |         |         |         |
  0+55       0.0759      1.24  V Q       |         |         |         |
  1+ 0       0.0845      1.24  V Q       |         |         |         |
  1+ 5       0.0931      1.25  |VQ       |         |         |         |
  1+10       0.1017      1.25  |VQ       |         |         |         |
  1+15       0.1103      1.25  |VQ       |         |         |         |
  1+20       0.1189      1.25  |VQ       |         |         |         |
  1+25       0.1276      1.26  |VQ       |         |         |         |
  1+30       0.1362      1.26  |VQ       |         |         |         |
  1+35       0.1449      1.26  |VQ       |         |         |         |
  1+40       0.1536      1.26  |VQ       |         |         |         |
  1+45       0.1623      1.27  |VQ       |         |         |         |
  1+50       0.1711      1.27  |VQ       |         |         |         |
  1+55       0.1798      1.27  |VQ       |         |         |         |
  2+ 0       0.1886      1.27  | Q       |         |         |         |
  2+ 5       0.1974      1.28  | Q       |         |         |         |
  2+10       0.2062      1.28  | Q       |         |         |         |
  2+15       0.2150      1.28  | Q       |         |         |         |
  2+20       0.2238      1.28  | Q       |         |         |         |
  2+25       0.2327      1.29  | Q       |         |         |         |
  2+30       0.2415      1.29  | Q       |         |         |         |
  2+35       0.2504      1.29  | Q       |         |         |         |
  2+40       0.2593      1.29  | Q       |         |         |         |
  2+45       0.2683      1.30  | Q       |         |         |         |
  2+50       0.2772      1.30  | Q       |         |         |         |
  2+55       0.2862      1.30  | QV      |         |         |         |
  3+ 0       0.2951      1.30  | QV      |         |         |         |
  3+ 5       0.3041      1.31  | QV      |         |         |         |
  3+10       0.3132      1.31  | QV      |         |         |         |
  3+15       0.3222      1.31  | QV      |         |         |         |
  3+20       0.3312      1.31  | QV      |         |         |         |
  3+25       0.3403      1.32  | QV      |         |         |         |
  3+30       0.3494      1.32  | QV      |         |         |         |
  3+35       0.3585      1.32  | QV      |         |         |         |
  3+40       0.3677      1.33  | QV      |         |         |         |
  3+45       0.3768      1.33  | Q V     |         |         |         |
  3+50       0.3860      1.33  | Q V     |         |         |         |
  3+55       0.3952      1.33  | Q V     |         |         |         |
  4+ 0       0.4044      1.34  | Q V     |         |         |         |
  4+ 5       0.4136      1.34  | Q V     |         |         |         |
  4+10       0.4229      1.34  | Q V     |         |         |         |
  4+15       0.4322      1.35  | Q V     |         |         |         |
  4+20       0.4414      1.35  | Q V     |         |         |         |
  4+25       0.4508      1.35  | Q V     |         |         |         |
  4+30       0.4601      1.36  | Q V     |         |         |         |
  4+35       0.4695      1.36  | Q  V    |         |         |         |
  4+40       0.4789      1.36  | Q  V    |         |         |         |
  4+45       0.4883      1.37  | Q  V    |         |         |         |
  4+50       0.4977      1.37  | Q  V    |         |         |         |
```

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 4+55      0.5071     1.37  | Q  V    |         |         |         |
 5+ 0      0.5166     1.38  | Q  V    |         |         |         |
 5+ 5      0.5261     1.38  | Q  V    |         |         |         |
 5+10      0.5356     1.38  | Q  V    |         |         |         |
 5+15      0.5452     1.39  | Q  V    |         |         |         |
 5+20      0.5548     1.39  | Q   V   |         |         |         |
 5+25      0.5643     1.39  | Q   V   |         |         |         |
 5+30      0.5740     1.40  | Q   V   |         |         |         |
 5+35      0.5836     1.40  | Q   V   |         |         |         |
 5+40      0.5933     1.40  | Q   V   |         |         |         |
 5+45      0.6030     1.41  | Q   V   |         |         |         |
 5+50      0.6127     1.41  | Q   V   |         |         |         |
 5+55      0.6224     1.41  | Q   V   |         |         |         |
 6+ 0      0.6322     1.42  | Q   V   |         |         |         |
 6+ 5      0.6420     1.42  | Q   V   |         |         |         |
 6+10      0.6518     1.43  | Q    V  |         |         |         |
 6+15      0.6617     1.43  | Q    V  |         |         |         |
 6+20      0.6715     1.43  | Q    V  |         |         |         |
 6+25      0.6814     1.44  | Q    V  |         |         |         |
 6+30      0.6914     1.44  | Q    V  |         |         |         |
 6+35      0.7013     1.45  | Q    V  |         |         |         |
 6+40      0.7113     1.45  | Q    V  |         |         |         |
 6+45      0.7213     1.45  | Q    V  |         |         |         |
 6+50      0.7314     1.46  | Q    V  |         |         |         |
 6+55      0.7415     1.46  | Q     V |         |         |         |
 7+ 0      0.7516     1.47  | Q     V |         |         |         |
 7+ 5      0.7617     1.47  | Q     V |         |         |         |
 7+10      0.7719     1.48  | Q     V |         |         |         |
 7+15      0.7821     1.48  | Q     V |         |         |         |
 7+20      0.7923     1.49  | Q     V |         |         |         |
 7+25      0.8026     1.49  | Q     V |         |         |         |
 7+30      0.8129     1.49  | Q     V |         |         |         |
 7+35      0.8232     1.50  | Q     V |         |         |         |
 7+40      0.8335     1.50  |  Q     V|         |         |         |
 7+45      0.8439     1.51  |  Q     V|         |         |         |
 7+50      0.8544     1.51  |  Q     V|         |         |         |
 7+55      0.8648     1.52  |  Q     V|         |         |         |
 8+ 0      0.8753     1.52  |  Q     V|         |         |         |
 8+ 5      0.8858     1.53  |  Q     V|         |         |         |
 8+10      0.8964     1.53  |  Q     V|         |         |         |
 8+15      0.9070     1.54  |  Q     V|         |         |         |
 8+20      0.9176     1.54  |  Q     V|         |         |         |
 8+25      0.9283     1.55  |  Q      V         |         |         |
 8+30      0.9390     1.56  |  Q      V         |         |         |
 8+35      0.9498     1.56  |  Q      V         |         |         |
 8+40      0.9606     1.57  |  Q      V         |         |         |
 8+45      0.9714     1.57  |  Q      V         |         |         |
 8+50      0.9823     1.58  |  Q      V         |         |         |
 8+55      0.9932     1.58  |  Q      V         |         |         |
 9+ 0      1.0041     1.59  |  Q      V         |         |         |
 9+ 5      1.0151     1.60  |  Q      V         |         |         |
 9+10      1.0261     1.60  |  Q       |V       |         |         |
 9+15      1.0372     1.61  |  Q       |V       |         |         |
 9+20      1.0483     1.61  |  Q       |V       |         |         |
 9+25      1.0595     1.62  |  Q       |V       |         |         |
 9+30      1.0707     1.63  |  Q       |V       |         |         |
 9+35      1.0820     1.63  |  Q       |V       |         |         |
 9+40      1.0933     1.64  |  Q       |V       |         |         |
 9+45      1.1046     1.65  |  Q       |V       |         |         |
 9+50      1.1160     1.66  |  Q       | V      |         |         |
 9+55      1.1275     1.66  |  Q       | V      |         |         |
10+ 0      1.1390     1.67  |  Q       | V      |         |         |
10+ 5      1.1505     1.68  |  Q       | V      |         |         |
10+10      1.1621     1.68  |  Q       | V      |         |         |
10+15      1.1738     1.69  |  Q       | V      |         |         |
10+20      1.1855     1.70  |  Q       | V      |         |         |
10+25      1.1972     1.71  |  Q       | V      |         |         |
10+30      1.2090     1.72  |  Q       |  V     |         |         |
10+35      1.2209     1.72  |  Q       |  V     |         |         |
10+40      1.2329     1.73  |  Q       |  V     |         |         |
10+45      1.2448     1.74  |  Q       |  V     |         |         |
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10+50      1.2569     1.75  |  Q      |  V      |         |         |
10+55      1.2690     1.76  |  Q      |  V      |         |         |
11+ 0      1.2812     1.77  |  Q      |  V      |         |         |
11+ 5      1.2934     1.78  |  Q      |  V      |         |         |
11+10      1.3057     1.79  |  Q      |   V     |         |         |
11+15      1.3181     1.80  |  Q      |   V     |         |         |
11+20      1.3306     1.81  |  Q      |   V     |         |         |
11+25      1.3431     1.82  |  Q      |   V     |         |         |
11+30      1.3557     1.83  |  Q      |   V     |         |         |
11+35      1.3683     1.84  |  Q      |   V     |         |         |
11+40      1.3811     1.85  |  Q      |   V     |         |         |
11+45      1.3939     1.86  |  Q      |    V    |         |         |
11+50      1.4068     1.87  |  Q      |    V    |         |         |
11+55      1.4197     1.88  |  Q      |    V    |         |         |
12+ 0      1.4328     1.90  |  Q      |    V    |         |         |
12+ 5      1.4459     1.90  |  Q      |    V    |         |         |
12+10      1.4586     1.85  |  Q      |    V    |         |         |
12+15      1.4711     1.82  |  Q      |    V    |         |         |
12+20      1.4836     1.81  |  Q      |     V   |         |         |
12+25      1.4961     1.82  |  Q      |     V   |         |         |
12+30      1.5087     1.83  |  Q      |     V   |         |         |
12+35      1.5214     1.84  |  Q      |     V   |         |         |
12+40      1.5341     1.85  |  Q      |     V   |         |         |
12+45      1.5470     1.87  |  Q      |     V   |         |         |
12+50      1.5600     1.89  |  Q      |     V   |         |         |
12+55      1.5731     1.90  |  Q      |      V  |         |         |
13+ 0      1.5863     1.92  |  Q      |      V  |         |         |
13+ 5      1.5997     1.94  |  Q      |      V  |         |         |
13+10      1.6132     1.96  |  Q      |      V  |         |         |
13+15      1.6269     1.98  |  Q      |      V  |         |         |
13+20      1.6407     2.00  |   Q     |      V  |         |         |
13+25      1.6546     2.03  |   Q     |      V  |         |         |
13+30      1.6688     2.05  |   Q     |       V |         |         |
13+35      1.6831     2.07  |   Q     |       V |         |         |
13+40      1.6975     2.10  |   Q     |       V |         |         |
13+45      1.7122     2.13  |   Q     |       V |         |         |
13+50      1.7270     2.16  |   Q     |       V |         |         |
13+55      1.7421     2.18  |   Q     |       V |         |         |
14+ 0      1.7573     2.22  |   Q     |        V|         |         |
14+ 5      1.7728     2.25  |   Q     |        V|         |         |
14+10      1.7885     2.28  |   Q     |        V|         |         |
14+15      1.8045     2.32  |   Q     |        V|         |         |
14+20      1.8208     2.36  |   Q     |        V|         |         |
14+25      1.8373     2.40  |   Q     |        V|         |         |
14+30      1.8541     2.44  |   Q     |         V         |         |
14+35      1.8713     2.49  |   Q     |         V         |         |
14+40      1.8888     2.54  |    Q    |         V         |         |
14+45      1.9067     2.59  |    Q    |         V         |         |
14+50      1.9249     2.65  |    Q    |         V         |         |
14+55      1.9436     2.72  |    Q    |         |V        |         |
15+ 0      1.9628     2.79  |    Q    |         |V        |         |
15+ 5      1.9825     2.86  |    Q    |         |V        |         |
15+10      2.0028     2.95  |    Q    |         |V        |         |
15+15      2.0238     3.04  |     Q   |         |V        |         |
15+20      2.0455     3.15  |     Q   |         | V       |         |
15+25      2.0672     3.15  |     Q   |         | V       |         |
15+30      2.0854     2.65  |    Q    |         | V       |         |
15+35      2.1007     2.22  |   Q     |         | V       |         |
15+40      2.1159     2.21  |   Q     |         | V       |         |
15+45      2.1320     2.33  |   Q     |         |  V      |         |
15+50      2.1500     2.61  |    Q    |         |  V      |         |
15+55      2.1713     3.09  |     Q   |         |  V      |         |
16+ 0      2.1997     4.13  |       Q |         |  V      |         |
16+ 5      2.2548     7.99  |         |    Q    |   V     |         |
16+10      2.3886    19.44  |         |         |    V    |        Q|
16+15      2.5056    16.98  |         |         |     V   |  Q      |
16+20      2.5628     8.31  |         |     Q   |      V  |         |
16+25      2.6014     5.61  |         |Q        |       V |         |
16+30      2.6328     4.56  |       Q |         |       V |         |
16+35      2.6597     3.90  |      Q  |         |       V |         |
16+40      2.6829     3.37  |     Q   |         |        V|         |
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16+45       2.7046      3.15  |     Q    |          |         V|          |
16+50       2.7254      3.01  |     Q    |          |         V|          |
16+55       2.7447      2.81  |    Q     |          |         V|          |
17+ 0       2.7625      2.59  |    Q     |          |         V|          |
17+ 5       2.7796      2.48  |   Q      |          |          V          |
17+10       2.7961      2.40  |   Q      |          |          V          |
17+15       2.8121      2.32  |   Q      |          |          V          |
17+20       2.8276      2.25  |   Q      |          |          V          |
17+25       2.8426      2.18  |   Q      |          |          V          |
17+30       2.8573      2.13  |   Q      |          |          V          |
17+35       2.8715      2.07  |   Q      |          |          |V         |
17+40       2.8855      2.02  |   Q      |          |          |V         |
17+45       2.8991      1.98  |  Q       |          |          |V         |
17+50       2.9125      1.94  |  Q       |          |          |V         |
17+55       2.9256      1.90  |  Q       |          |          |V         |
18+ 0       2.9384      1.87  |  Q       |          |          |V         |
18+ 5       2.9511      1.84  |  Q       |          |          |V         |
18+10       2.9640      1.87  |  Q       |          |          | V        |
18+15       2.9770      1.89  |  Q       |          |          | V        |
18+20       2.9900      1.88  |  Q       |          |          | V        |
18+25       3.0029      1.87  |  Q       |          |          | V        |
18+30       3.0156      1.85  |  Q       |          |          | V        |
18+35       3.0282      1.83  |  Q       |          |          | V        |
18+40       3.0407      1.81  |  Q       |          |          | V        |
18+45       3.0531      1.79  |  Q       |          |          |  V       |
18+50       3.0653      1.78  |  Q       |          |          |  V       |
18+55       3.0774      1.76  |  Q       |          |          |  V       |
19+ 0       3.0894      1.74  |  Q       |          |          |  V       |
19+ 5       3.1012      1.72  |  Q       |          |          |  V       |
19+10       3.1130      1.71  |  Q       |          |          |  V       |
19+15       3.1246      1.69  |  Q       |          |          |  V       |
19+20       3.1362      1.68  |  Q       |          |          |  V       |
19+25       3.1476      1.66  |  Q       |          |          |   V      |
19+30       3.1590      1.65  |  Q       |          |          |   V      |
19+35       3.1702      1.63  |  Q       |          |          |   V      |
19+40       3.1814      1.62  |  Q       |          |          |   V      |
19+45       3.1924      1.61  |  Q       |          |          |   V      |
19+50       3.2034      1.59  |  Q       |          |          |   V      |
19+55       3.2143      1.58  |  Q       |          |          |   V      |
20+ 0       3.2251      1.57  |  Q       |          |          |   V      |
20+ 5       3.2359      1.56  |  Q       |          |          |    V     |
20+10       3.2465      1.55  |  Q       |          |          |    V     |
20+15       3.2571      1.54  |  Q       |          |          |    V     |
20+20       3.2676      1.53  |  Q       |          |          |    V     |
20+25       3.2781      1.52  |  Q       |          |          |    V     |
20+30       3.2885      1.51  |  Q       |          |          |    V     |
20+35       3.2988      1.50  | Q        |          |          |    V     |
20+40       3.3090      1.49  | Q        |          |          |    V     |
20+45       3.3192      1.48  | Q        |          |          |    V     |
20+50       3.3294      1.47  | Q        |          |          |     V    |
20+55       3.3394      1.46  | Q        |          |          |     V    |
21+ 0       3.3494      1.45  | Q        |          |          |     V    |
21+ 5       3.3594      1.45  | Q        |          |          |     V    |
21+10       3.3693      1.44  | Q        |          |          |     V    |
21+15       3.3791      1.43  | Q        |          |          |     V    |
21+20       3.3889      1.42  | Q        |          |          |     V    |
21+25       3.3987      1.41  | Q        |          |          |     V    |
21+30       3.4083      1.41  | Q        |          |          |     V    |
21+35       3.4180      1.40  | Q        |          |          |     V    |
21+40       3.4276      1.39  | Q        |          |          |      V   |
21+45       3.4371      1.39  | Q        |          |          |      V   |
21+50       3.4466      1.38  | Q        |          |          |      V   |
21+55       3.4560      1.37  | Q        |          |          |      V   |
22+ 0       3.4654      1.37  | Q        |          |          |      V   |
22+ 5       3.4748      1.36  | Q        |          |          |      V   |
22+10       3.4841      1.35  | Q        |          |          |      V   |
22+15       3.4934      1.35  | Q        |          |          |      V   |
22+20       3.5026      1.34  | Q        |          |          |      V   |
22+25       3.5118      1.33  | Q        |          |          |      V   |
22+30       3.5209      1.33  | Q        |          |          |       V  |
22+35       3.5301      1.32  | Q        |          |          |       V  |
```

```
   22+40       3.5391      1.32  | Q       |         |         |       V |
   22+45       3.5482      1.31  | Q       |         |         |       V |
   22+50       3.5571      1.31  | Q       |         |         |       V |
   22+55       3.5661      1.30  | Q       |         |         |       V |
   23+ 0       3.5750      1.30  | Q       |         |         |       V |
   23+ 5       3.5839      1.29  | Q       |         |         |       V |
   23+10       3.5928      1.28  | Q       |         |         |       V |
   23+15       3.6016      1.28  | Q       |         |         |       V |
   23+20       3.6103      1.27  | Q       |         |         |        V|
   23+25       3.6191      1.27  | Q       |         |         |        V|
   23+30       3.6278      1.26  | Q       |         |         |        V|
   23+35       3.6365      1.26  | Q       |         |         |        V|
   23+40       3.6451      1.26  | Q       |         |         |        V|
   23+45       3.6537      1.25  | Q       |         |         |        V|
   23+50       3.6623      1.25  | Q       |         |         |        V|
   23+55       3.6709      1.24  | Q       |         |         |        V|
   24+ 0       3.6794      1.24  | Q       |         |         |        V|
   24+ 5       3.6874      1.16  | Q       |         |         |        V|
   24+10       3.6923      0.71  |Q        |         |         |        V|
   24+15       3.6945      0.32  Q         |         |         |        V|
   24+20       3.6957      0.18  Q         |         |         |        V|
   24+25       3.6963      0.09  Q         |         |         |        V|
   24+30       3.6966      0.05  Q         |         |         |        V|
   24+35       3.6968      0.02  Q         |         |         |        V|
   24+40       3.6969      0.01  Q         |         |         |        V|
   24+45       3.6970      0.01  Q         |         |         |        V|
   24+50       3.6970      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'F' – 100 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  11/11/24

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----------------------------------------------------------------------

San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'F'
100 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.71           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.71           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.71          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.71           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.71           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.71          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      92.8          6.71      1.000     0.140    1.000    0.140

Area-averaged adjusted loss rate Fm (In/Hr) =  0.140

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
6.71	1.000	78.0	92.8	0.78	0.926

Area-averaged catchment yield fraction, Y = 0.926
Area-averaged low loss fraction, Yb = 0.074
User entry of time of concentration = 0.162 (hours)
++
Watershed area = 6.71(Ac.)
Catchment Lag time = 0.130 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 64.3004
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.140(In/Hr)
Average low loss rate fraction (Yb) = 0.074 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 6.71(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.712(In)
30-minute factor = 1.000 Adjusted rainfall = 1.218(In)
1-hour factor = 1.000 Adjusted rainfall = 1.500(In)
3-hour factor = 1.000 Adjusted rainfall = 2.942(In)
6-hour factor = 1.000 Adjusted rainfall = 4.500(In)
24-hour factor = 1.000 Adjusted rainfall = 12.000(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 81.15 (CFS))	
1	6.228	5.054
2	42.193	29.185
3	74.058	25.858
4	85.789	9.519
5	92.451	5.407
6	96.283	3.110
7	98.090	1.467
8	98.816	0.589
9	99.292	0.386
10	99.729	0.355
11	100.000	0.220

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7115	0.7115
2	0.8760	0.1645
3	0.9893	0.1133
4	1.0785	0.0892
5	1.1532	0.0747
6	1.2180	0.0648
7	1.2756	0.0576
8	1.3278	0.0521
9	1.3755	0.0478
10	1.4197	0.0442
11	1.4609	0.0412
12	1.4995	0.0386
13	1.5750	0.0755
14	1.6482	0.0732
15	1.7195	0.0713

16	1.7889	0.0694
17	1.8567	0.0678
18	1.9230	0.0663
19	1.9878	0.0648
20	2.0513	0.0635
21	2.1137	0.0623
22	2.1748	0.0612
23	2.2350	0.0601
24	2.2941	0.0591
25	2.3522	0.0582
26	2.4095	0.0573
27	2.4659	0.0564
28	2.5216	0.0556
29	2.5764	0.0549
30	2.6306	0.0541
31	2.6840	0.0534
32	2.7368	0.0528
33	2.7889	0.0521
34	2.8405	0.0515
35	2.8914	0.0510
36	2.9418	0.0504
37	2.9917	0.0498
38	3.0410	0.0493
39	3.0898	0.0488
40	3.1382	0.0483
41	3.1860	0.0479
42	3.2335	0.0474
43	3.2805	0.0470
44	3.3270	0.0466
45	3.3732	0.0462
46	3.4190	0.0458
47	3.4644	0.0454
48	3.5094	0.0450
49	3.5540	0.0447
50	3.5983	0.0443
51	3.6423	0.0440
52	3.6859	0.0436
53	3.7292	0.0433
54	3.7722	0.0430
55	3.8149	0.0427
56	3.8573	0.0424
57	3.8993	0.0421
58	3.9412	0.0418
59	3.9827	0.0415
60	4.0239	0.0413
61	4.0649	0.0410
62	4.1057	0.0407
63	4.1461	0.0405
64	4.1864	0.0402
65	4.2264	0.0400
66	4.2661	0.0398
67	4.3056	0.0395
68	4.3449	0.0393
69	4.3840	0.0391
70	4.4228	0.0389
71	4.4615	0.0386
72	4.4999	0.0384
73	4.5440	0.0441
74	4.5880	0.0440
75	4.6318	0.0438
76	4.6754	0.0436
77	4.7188	0.0434
78	4.7621	0.0433
79	4.8052	0.0431
80	4.8482	0.0430
81	4.8910	0.0428
82	4.9336	0.0426
83	4.9761	0.0425
84	5.0185	0.0423
85	5.0607	0.0422
86	5.1027	0.0421

87	5.1446	0.0419
88	5.1864	0.0418
89	5.2280	0.0416
90	5.2695	0.0415
91	5.3109	0.0414
92	5.3521	0.0412
93	5.3932	0.0411
94	5.4342	0.0410
95	5.4750	0.0408
96	5.5157	0.0407
97	5.5563	0.0406
98	5.5968	0.0405
99	5.6371	0.0403
100	5.6773	0.0402
101	5.7174	0.0401
102	5.7574	0.0400
103	5.7973	0.0399
104	5.8371	0.0398
105	5.8767	0.0397
106	5.9163	0.0395
107	5.9557	0.0394
108	5.9951	0.0393
109	6.0343	0.0392
110	6.0734	0.0391
111	6.1124	0.0390
112	6.1513	0.0389
113	6.1901	0.0388
114	6.2288	0.0387
115	6.2674	0.0386
116	6.3059	0.0385
117	6.3444	0.0384
118	6.3827	0.0383
119	6.4209	0.0382
120	6.4590	0.0381
121	6.4971	0.0380
122	6.5350	0.0379
123	6.5729	0.0379
124	6.6106	0.0378
125	6.6483	0.0377
126	6.6859	0.0376
127	6.7234	0.0375
128	6.7608	0.0374
129	6.7981	0.0373
130	6.8354	0.0372
131	6.8725	0.0372
132	6.9096	0.0371
133	6.9466	0.0370
134	6.9835	0.0369
135	7.0204	0.0368
136	7.0571	0.0368
137	7.0938	0.0367
138	7.1304	0.0366
139	7.1669	0.0365
140	7.2033	0.0364
141	7.2397	0.0364
142	7.2760	0.0363
143	7.3122	0.0362
144	7.3484	0.0361
145	7.3844	0.0361
146	7.4204	0.0360
147	7.4564	0.0359
148	7.4922	0.0359
149	7.5280	0.0358
150	7.5637	0.0357
151	7.5993	0.0356
152	7.6349	0.0356
153	7.6704	0.0355
154	7.7059	0.0354
155	7.7412	0.0354
156	7.7765	0.0353
157	7.8118	0.0352

158	7.8469	0.0352
159	7.8820	0.0351
160	7.9171	0.0350
161	7.9521	0.0350
162	7.9870	0.0349
163	8.0218	0.0349
164	8.0566	0.0348
165	8.0913	0.0347
166	8.1260	0.0347
167	8.1606	0.0346
168	8.1952	0.0345
169	8.2296	0.0345
170	8.2641	0.0344
171	8.2984	0.0344
172	8.3327	0.0343
173	8.3670	0.0342
174	8.4012	0.0342
175	8.4353	0.0341
176	8.4694	0.0341
177	8.5034	0.0340
178	8.5374	0.0340
179	8.5713	0.0339
180	8.6051	0.0339
181	8.6389	0.0338
182	8.6727	0.0337
183	8.7063	0.0337
184	8.7400	0.0336
185	8.7736	0.0336
186	8.8071	0.0335
187	8.8406	0.0335
188	8.8740	0.0334
189	8.9074	0.0334
190	8.9407	0.0333
191	8.9739	0.0333
192	9.0072	0.0332
193	9.0403	0.0332
194	9.0734	0.0331
195	9.1065	0.0331
196	9.1395	0.0330
197	9.1725	0.0330
198	9.2054	0.0329
199	9.2383	0.0329
200	9.2711	0.0328
201	9.3039	0.0328
202	9.3366	0.0327
203	9.3693	0.0327
204	9.4019	0.0326
205	9.4345	0.0326
206	9.4670	0.0325
207	9.4995	0.0325
208	9.5320	0.0324
209	9.5644	0.0324
210	9.5967	0.0324
211	9.6291	0.0323
212	9.6613	0.0323
213	9.6935	0.0322
214	9.7257	0.0322
215	9.7578	0.0321
216	9.7899	0.0321
217	9.8220	0.0320
218	9.8540	0.0320
219	9.8859	0.0320
220	9.9179	0.0319
221	9.9497	0.0319
222	9.9816	0.0318
223	10.0134	0.0318
224	10.0451	0.0317
225	10.0768	0.0317
226	10.1085	0.0317
227	10.1401	0.0316
228	10.1717	0.0316

229	10.2032	0.0315
230	10.2347	0.0315
231	10.2662	0.0315
232	10.2976	0.0314
233	10.3290	0.0314
234	10.3604	0.0313
235	10.3917	0.0313
236	10.4229	0.0313
237	10.4542	0.0312
238	10.4854	0.0312
239	10.5165	0.0312
240	10.5476	0.0311
241	10.5787	0.0311
242	10.6097	0.0310
243	10.6407	0.0310
244	10.6717	0.0310
245	10.7026	0.0309
246	10.7335	0.0309
247	10.7644	0.0309
248	10.7952	0.0308
249	10.8260	0.0308
250	10.8567	0.0307
251	10.8874	0.0307
252	10.9181	0.0307
253	10.9487	0.0306
254	10.9793	0.0306
255	11.0099	0.0306
256	11.0404	0.0305
257	11.0709	0.0305
258	11.1014	0.0305
259	11.1318	0.0304
260	11.1622	0.0304
261	11.1926	0.0304
262	11.2229	0.0303
263	11.2532	0.0303
264	11.2834	0.0303
265	11.3137	0.0302
266	11.3438	0.0302
267	11.3740	0.0302
268	11.4041	0.0301
269	11.4342	0.0301
270	11.4643	0.0301
271	11.4943	0.0300
272	11.5243	0.0300
273	11.5543	0.0300
274	11.5842	0.0299
275	11.6141	0.0299
276	11.6439	0.0299
277	11.6738	0.0298
278	11.7036	0.0298
279	11.7333	0.0298
280	11.7631	0.0297
281	11.7928	0.0297
282	11.8225	0.0297
283	11.8521	0.0296
284	11.8817	0.0296
285	11.9113	0.0296
286	11.9409	0.0296
287	11.9704	0.0295
288	11.9999	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0022	0.0273
2	0.0295	0.0022	0.0274
3	0.0296	0.0022	0.0274
4	0.0296	0.0022	0.0274
5	0.0297	0.0022	0.0275
6	0.0297	0.0022	0.0275

7	0.0298	0.0022	0.0276
8	0.0298	0.0022	0.0276
9	0.0299	0.0022	0.0277
10	0.0299	0.0022	0.0277
11	0.0300	0.0022	0.0278
12	0.0300	0.0022	0.0278
13	0.0301	0.0022	0.0278
14	0.0301	0.0022	0.0279
15	0.0302	0.0022	0.0279
16	0.0302	0.0022	0.0280
17	0.0303	0.0022	0.0280
18	0.0303	0.0022	0.0281
19	0.0304	0.0022	0.0281
20	0.0304	0.0022	0.0282
21	0.0305	0.0022	0.0282
22	0.0305	0.0022	0.0283
23	0.0306	0.0022	0.0283
24	0.0306	0.0023	0.0283
25	0.0307	0.0023	0.0284
26	0.0307	0.0023	0.0284
27	0.0308	0.0023	0.0285
28	0.0308	0.0023	0.0285
29	0.0309	0.0023	0.0286
30	0.0309	0.0023	0.0286
31	0.0310	0.0023	0.0287
32	0.0310	0.0023	0.0288
33	0.0311	0.0023	0.0288
34	0.0312	0.0023	0.0289
35	0.0312	0.0023	0.0289
36	0.0313	0.0023	0.0290
37	0.0313	0.0023	0.0290
38	0.0314	0.0023	0.0291
39	0.0315	0.0023	0.0291
40	0.0315	0.0023	0.0292
41	0.0316	0.0023	0.0293
42	0.0316	0.0023	0.0293
43	0.0317	0.0023	0.0294
44	0.0317	0.0023	0.0294
45	0.0318	0.0023	0.0295
46	0.0319	0.0023	0.0295
47	0.0320	0.0024	0.0296
48	0.0320	0.0024	0.0296
49	0.0321	0.0024	0.0297
50	0.0321	0.0024	0.0298
51	0.0322	0.0024	0.0298
52	0.0323	0.0024	0.0299
53	0.0324	0.0024	0.0300
54	0.0324	0.0024	0.0300
55	0.0325	0.0024	0.0301
56	0.0325	0.0024	0.0301
57	0.0326	0.0024	0.0302
58	0.0327	0.0024	0.0303
59	0.0328	0.0024	0.0304
60	0.0328	0.0024	0.0304
61	0.0329	0.0024	0.0305
62	0.0330	0.0024	0.0305
63	0.0331	0.0024	0.0306
64	0.0331	0.0024	0.0307
65	0.0332	0.0024	0.0308
66	0.0333	0.0024	0.0308
67	0.0334	0.0025	0.0309
68	0.0334	0.0025	0.0310
69	0.0335	0.0025	0.0311
70	0.0336	0.0025	0.0311
71	0.0337	0.0025	0.0312
72	0.0337	0.0025	0.0313
73	0.0339	0.0025	0.0314
74	0.0339	0.0025	0.0314
75	0.0340	0.0025	0.0315
76	0.0341	0.0025	0.0316
77	0.0342	0.0025	0.0317

78	0.0342	0.0025	0.0317
79	0.0344	0.0025	0.0318
80	0.0344	0.0025	0.0319
81	0.0345	0.0025	0.0320
82	0.0346	0.0025	0.0321
83	0.0347	0.0026	0.0322
84	0.0348	0.0026	0.0322
85	0.0349	0.0026	0.0323
86	0.0350	0.0026	0.0324
87	0.0351	0.0026	0.0325
88	0.0352	0.0026	0.0326
89	0.0353	0.0026	0.0327
90	0.0354	0.0026	0.0328
91	0.0355	0.0026	0.0329
92	0.0356	0.0026	0.0330
93	0.0357	0.0026	0.0331
94	0.0358	0.0026	0.0331
95	0.0359	0.0026	0.0333
96	0.0360	0.0026	0.0333
97	0.0361	0.0027	0.0335
98	0.0362	0.0027	0.0336
99	0.0364	0.0027	0.0337
100	0.0364	0.0027	0.0338
101	0.0366	0.0027	0.0339
102	0.0367	0.0027	0.0340
103	0.0368	0.0027	0.0341
104	0.0369	0.0027	0.0342
105	0.0371	0.0027	0.0343
106	0.0372	0.0027	0.0344
107	0.0373	0.0027	0.0346
108	0.0374	0.0028	0.0347
109	0.0376	0.0028	0.0348
110	0.0377	0.0028	0.0349
111	0.0379	0.0028	0.0351
112	0.0379	0.0028	0.0352
113	0.0381	0.0028	0.0353
114	0.0382	0.0028	0.0354
115	0.0384	0.0028	0.0356
116	0.0385	0.0028	0.0357
117	0.0387	0.0028	0.0359
118	0.0388	0.0029	0.0360
119	0.0390	0.0029	0.0361
120	0.0391	0.0029	0.0362
121	0.0393	0.0029	0.0364
122	0.0394	0.0029	0.0365
123	0.0397	0.0029	0.0367
124	0.0398	0.0029	0.0368
125	0.0400	0.0029	0.0371
126	0.0401	0.0030	0.0372
127	0.0403	0.0030	0.0374
128	0.0405	0.0030	0.0375
129	0.0407	0.0030	0.0377
130	0.0408	0.0030	0.0378
131	0.0411	0.0030	0.0381
132	0.0412	0.0030	0.0382
133	0.0415	0.0031	0.0384
134	0.0416	0.0031	0.0386
135	0.0419	0.0031	0.0388
136	0.0421	0.0031	0.0390
137	0.0423	0.0031	0.0392
138	0.0425	0.0031	0.0394
139	0.0428	0.0032	0.0396
140	0.0430	0.0032	0.0398
141	0.0433	0.0032	0.0401
142	0.0434	0.0032	0.0402
143	0.0438	0.0032	0.0406
144	0.0440	0.0032	0.0407
145	0.0384	0.0028	0.0356
146	0.0386	0.0028	0.0358
147	0.0391	0.0029	0.0362
148	0.0393	0.0029	0.0364

149	0.0398	0.0029	0.0368
150	0.0400	0.0029	0.0370
151	0.0405	0.0030	0.0375
152	0.0407	0.0030	0.0377
153	0.0413	0.0030	0.0382
154	0.0415	0.0031	0.0385
155	0.0421	0.0031	0.0390
156	0.0424	0.0031	0.0393
157	0.0430	0.0032	0.0398
158	0.0433	0.0032	0.0401
159	0.0440	0.0032	0.0407
160	0.0443	0.0033	0.0410
161	0.0450	0.0033	0.0417
162	0.0454	0.0033	0.0420
163	0.0462	0.0034	0.0428
164	0.0466	0.0034	0.0431
165	0.0474	0.0035	0.0439
166	0.0479	0.0035	0.0444
167	0.0488	0.0036	0.0452
168	0.0493	0.0036	0.0457
169	0.0504	0.0037	0.0467
170	0.0510	0.0038	0.0472
171	0.0521	0.0038	0.0483
172	0.0528	0.0039	0.0489
173	0.0541	0.0040	0.0502
174	0.0549	0.0040	0.0508
175	0.0564	0.0042	0.0523
176	0.0573	0.0042	0.0531
177	0.0591	0.0044	0.0548
178	0.0601	0.0044	0.0557
179	0.0623	0.0046	0.0577
180	0.0635	0.0047	0.0589
181	0.0663	0.0049	0.0614
182	0.0678	0.0050	0.0628
183	0.0713	0.0052	0.0660
184	0.0732	0.0054	0.0679
185	0.0386	0.0028	0.0358
186	0.0412	0.0030	0.0381
187	0.0478	0.0035	0.0442
188	0.0521	0.0038	0.0483
189	0.0648	0.0048	0.0601
190	0.0747	0.0055	0.0692
191	0.1133	0.0083	0.1050
192	0.1645	0.0117	0.1528
193	0.7115	0.0117	0.6999
194	0.0892	0.0066	0.0826
195	0.0576	0.0042	0.0534
196	0.0442	0.0033	0.0409
197	0.0755	0.0056	0.0699
198	0.0694	0.0051	0.0643
199	0.0648	0.0048	0.0601
200	0.0612	0.0045	0.0567
201	0.0582	0.0043	0.0539
202	0.0556	0.0041	0.0515
203	0.0534	0.0039	0.0495
204	0.0515	0.0038	0.0477
205	0.0498	0.0037	0.0462
206	0.0483	0.0036	0.0448
207	0.0470	0.0035	0.0435
208	0.0458	0.0034	0.0424
209	0.0447	0.0033	0.0414
210	0.0436	0.0032	0.0404
211	0.0427	0.0031	0.0395
212	0.0418	0.0031	0.0387
213	0.0410	0.0030	0.0380
214	0.0402	0.0030	0.0373
215	0.0395	0.0029	0.0366
216	0.0389	0.0029	0.0360
217	0.0441	0.0032	0.0409
218	0.0436	0.0032	0.0404
219	0.0431	0.0032	0.0399

220	0.0426	0.0031	0.0395
221	0.0422	0.0031	0.0391
222	0.0418	0.0031	0.0387
223	0.0414	0.0030	0.0383
224	0.0410	0.0030	0.0380
225	0.0406	0.0030	0.0376
226	0.0402	0.0030	0.0373
227	0.0399	0.0029	0.0369
228	0.0395	0.0029	0.0366
229	0.0392	0.0029	0.0363
230	0.0389	0.0029	0.0360
231	0.0386	0.0028	0.0358
232	0.0383	0.0028	0.0355
233	0.0380	0.0028	0.0352
234	0.0378	0.0028	0.0350
235	0.0375	0.0028	0.0347
236	0.0372	0.0027	0.0345
237	0.0370	0.0027	0.0343
238	0.0368	0.0027	0.0340
239	0.0365	0.0027	0.0338
240	0.0363	0.0027	0.0336
241	0.0361	0.0027	0.0334
242	0.0359	0.0026	0.0332
243	0.0356	0.0026	0.0330
244	0.0354	0.0026	0.0328
245	0.0352	0.0026	0.0326
246	0.0350	0.0026	0.0325
247	0.0349	0.0026	0.0323
248	0.0347	0.0026	0.0321
249	0.0345	0.0025	0.0319
250	0.0343	0.0025	0.0318
251	0.0341	0.0025	0.0316
252	0.0340	0.0025	0.0315
253	0.0338	0.0025	0.0313
254	0.0336	0.0025	0.0312
255	0.0335	0.0025	0.0310
256	0.0333	0.0025	0.0309
257	0.0332	0.0024	0.0307
258	0.0330	0.0024	0.0306
259	0.0329	0.0024	0.0305
260	0.0327	0.0024	0.0303
261	0.0326	0.0024	0.0302
262	0.0324	0.0024	0.0301
263	0.0323	0.0024	0.0299
264	0.0322	0.0024	0.0298
265	0.0320	0.0024	0.0297
266	0.0319	0.0023	0.0296
267	0.0318	0.0023	0.0295
268	0.0317	0.0023	0.0293
269	0.0315	0.0023	0.0292
270	0.0314	0.0023	0.0291
271	0.0313	0.0023	0.0290
272	0.0312	0.0023	0.0289
273	0.0311	0.0023	0.0288
274	0.0310	0.0023	0.0287
275	0.0309	0.0023	0.0286
276	0.0307	0.0023	0.0285
277	0.0306	0.0023	0.0284
278	0.0305	0.0022	0.0283
279	0.0304	0.0022	0.0282
280	0.0303	0.0022	0.0281
281	0.0302	0.0022	0.0280
282	0.0301	0.0022	0.0279
283	0.0300	0.0022	0.0278
284	0.0299	0.0022	0.0277
285	0.0298	0.0022	0.0276
286	0.0297	0.0022	0.0276
287	0.0296	0.0022	0.0275
288	0.0296	0.0022	0.0274

```
      Total soil rain loss =      0.84(In)
      Total effective rainfall =     11.16(In)
      Peak flow rate in flood hydrograph =     26.49(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0010      0.14  Q         |         |         |         |
  0+10       0.0074      0.94  VQ        |         |         |         |
  0+15       0.0187      1.64  V Q       |         |         |         |
  0+20       0.0318      1.91  V Q       |         |         |         |
  0+25       0.0460      2.06  V Q       |         |         |         |
  0+30       0.0608      2.14  V Q       |         |         |         |
  0+35       0.0758      2.19  V Q       |         |         |         |
  0+40       0.0910      2.21  V Q       |         |         |         |
  0+45       0.1063      2.22  V Q       |         |         |         |
  0+50       0.1217      2.23  V Q       |         |         |         |
  0+55       0.1372      2.24  V Q       |         |         |         |
  1+ 0       0.1527      2.25  V Q       |         |         |         |
  1+ 5       0.1682      2.25  |V Q       |         |         |         |
  1+10       0.1837      2.26  |V Q       |         |         |         |
  1+15       0.1993      2.26  |V Q       |         |         |         |
  1+20       0.2149      2.26  |V Q       |         |         |         |
  1+25       0.2305      2.27  |V Q       |         |         |         |
  1+30       0.2461      2.27  |V Q       |         |         |         |
  1+35       0.2617      2.27  |V Q       |         |         |         |
  1+40       0.2774      2.28  |V Q       |         |         |         |
  1+45       0.2931      2.28  |V Q       |         |         |         |
  1+50       0.3089      2.29  |V Q       |         |         |         |
  1+55       0.3246      2.29  | VQ       |         |         |         |
  2+ 0       0.3404      2.29  | VQ       |         |         |         |
  2+ 5       0.3563      2.30  | VQ       |         |         |         |
  2+10       0.3721      2.30  | VQ       |         |         |         |
  2+15       0.3880      2.30  | VQ       |         |         |         |
  2+20       0.4039      2.31  | VQ       |         |         |         |
  2+25       0.4198      2.31  | VQ       |         |         |         |
  2+30       0.4358      2.32  | VQ       |         |         |         |
  2+35       0.4518      2.32  | VQ       |         |         |         |
  2+40       0.4678      2.33  |  Q       |         |         |         |
  2+45       0.4838      2.33  |  Q       |         |         |         |
  2+50       0.4999      2.33  |  Q       |         |         |         |
  2+55       0.5160      2.34  |  Q       |         |         |         |
  3+ 0       0.5321      2.34  |  Q       |         |         |         |
  3+ 5       0.5483      2.35  |  Q       |         |         |         |
  3+10       0.5645      2.35  |  Q       |         |         |         |
  3+15       0.5807      2.36  |  Q       |         |         |         |
  3+20       0.5969      2.36  |  Q       |         |         |         |
  3+25       0.6132      2.36  |  Q       |         |         |         |
  3+30       0.6295      2.37  |  QV      |         |         |         |
  3+35       0.6459      2.37  |  QV      |         |         |         |
  3+40       0.6623      2.38  |  QV      |         |         |         |
  3+45       0.6787      2.38  |  QV      |         |         |         |
  3+50       0.6951      2.39  |  QV      |         |         |         |
  3+55       0.7116      2.39  |  QV      |         |         |         |
  4+ 0       0.7281      2.40  |  QV      |         |         |         |
  4+ 5       0.7446      2.40  |  QV      |         |         |         |
  4+10       0.7612      2.41  |  QV      |         |         |         |
  4+15       0.7778      2.41  |  QV      |         |         |         |
  4+20       0.7945      2.42  |  Q V     |         |         |         |
  4+25       0.8111      2.42  |  Q V     |         |         |         |
  4+30       0.8278      2.43  |  Q V     |         |         |         |
  4+35       0.8446      2.43  |  Q V     |         |         |         |
  4+40       0.8614      2.44  |  Q V     |         |         |         |
  4+45       0.8782      2.44  |  Q V     |         |         |         |
  4+50       0.8950      2.45  |  Q V     |         |         |         |
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 4+55      0.9119      2.45  |  Q V    |         |         |         |
 5+ 0      0.9288      2.46  |  Q V    |         |         |         |
 5+ 5      0.9458      2.46  |  Q  V   |         |         |         |
 5+10      0.9628      2.47  |  Q  V   |         |         |         |
 5+15      0.9798      2.47  |  Q  V   |         |         |         |
 5+20      0.9969      2.48  |  Q  V   |         |         |         |
 5+25      1.0140      2.48  |  Q  V   |         |         |         |
 5+30      1.0312      2.49  |  Q  V   |         |         |         |
 5+35      1.0484      2.50  |  Q  V   |         |         |         |
 5+40      1.0656      2.50  |  Q  V   |         |         |         |
 5+45      1.0828      2.51  |  Q  V   |         |         |         |
 5+50      1.1002      2.51  |  Q   V  |         |         |         |
 5+55      1.1175      2.52  |  Q   V  |         |         |         |
 6+ 0      1.1349      2.53  |  Q   V  |         |         |         |
 6+ 5      1.1523      2.53  |  Q   V  |         |         |         |
 6+10      1.1698      2.54  |  Q   V  |         |         |         |
 6+15      1.1873      2.54  |  Q   V  |         |         |         |
 6+20      1.2049      2.55  |  Q   V  |         |         |         |
 6+25      1.2225      2.56  |  Q   V  |         |         |         |
 6+30      1.2401      2.56  |  Q   V  |         |         |         |
 6+35      1.2578      2.57  |  Q    V |         |         |         |
 6+40      1.2756      2.58  |  Q    V |         |         |         |
 6+45      1.2933      2.58  |  Q    V |         |         |         |
 6+50      1.3112      2.59  |  Q    V |         |         |         |
 6+55      1.3290      2.60  |  Q    V |         |         |         |
 7+ 0      1.3470      2.60  |  Q    V |         |         |         |
 7+ 5      1.3649      2.61  |  Q    V |         |         |         |
 7+10      1.3829      2.62  |  Q    V |         |         |         |
 7+15      1.4010      2.62  |  Q    V |         |         |         |
 7+20      1.4191      2.63  |  Q     V|         |         |         |
 7+25      1.4373      2.64  |  Q     V|         |         |         |
 7+30      1.4555      2.64  |  Q     V|         |         |         |
 7+35      1.4738      2.65  |  Q     V|         |         |         |
 7+40      1.4921      2.66  |  Q     V|         |         |         |
 7+45      1.5105      2.67  |  Q     V|         |         |         |
 7+50      1.5289      2.68  |  Q     V|         |         |         |
 7+55      1.5474      2.68  |  Q     V|         |         |         |
 8+ 0      1.5659      2.69  |  Q      V         |         |         |
 8+ 5      1.5845      2.70  |  Q      V         |         |         |
 8+10      1.6031      2.71  |  Q      V         |         |         |
 8+15      1.6218      2.72  |  Q      V         |         |         |
 8+20      1.6406      2.72  |  Q      V         |         |         |
 8+25      1.6594      2.73  |  Q      V         |         |         |
 8+30      1.6783      2.74  |  Q      V         |         |         |
 8+35      1.6972      2.75  |  Q      V         |         |         |
 8+40      1.7162      2.76  |  Q       |V       |         |         |
 8+45      1.7353      2.77  |  Q       |V       |         |         |
 8+50      1.7544      2.78  |  Q       |V       |         |         |
 8+55      1.7736      2.79  |  Q       |V       |         |         |
 9+ 0      1.7928      2.79  |  Q       |V       |         |         |
 9+ 5      1.8121      2.80  |  Q       |V       |         |         |
 9+10      1.8315      2.81  |  Q       |V       |         |         |
 9+15      1.8509      2.82  |  Q       |V       |         |         |
 9+20      1.8705      2.83  |  Q       |V       |         |         |
 9+25      1.8900      2.84  |  Q       | V      |         |         |
 9+30      1.9097      2.85  |  Q       | V      |         |         |
 9+35      1.9294      2.86  |  Q       | V      |         |         |
 9+40      1.9492      2.87  |  Q       | V      |         |         |
 9+45      1.9691      2.89  |  Q       | V      |         |         |
 9+50      1.9890      2.90  |  Q       | V      |         |         |
 9+55      2.0091      2.91  |  Q       | V      |         |         |
10+ 0      2.0292      2.92  |  Q       |  V     |         |         |
10+ 5      2.0493      2.93  |  Q       |  V     |         |         |
10+10      2.0696      2.94  |  Q       |  V     |         |         |
10+15      2.0899      2.95  |  Q       |  V     |         |         |
10+20      2.1104      2.97  |  Q       |  V     |         |         |
10+25      2.1309      2.98  |  Q       |  V     |         |         |
10+30      2.1515      2.99  |  Q       |  V     |         |         |
10+35      2.1722      3.00  |   Q      |  V     |         |         |
10+40      2.1929      3.02  |   Q      |   V    |         |         |
10+45      2.2138      3.03  |   Q      |   V    |         |         |
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10+50       2.2348      3.04  |   Q     |   V     |         |         |
10+55       2.2558      3.06  |   Q     |   V     |         |         |
11+ 0       2.2770      3.07  |   Q     |   V     |         |         |
11+ 5       2.2982      3.09  |   Q     |   V     |         |         |
11+10       2.3196      3.10  |   Q     |   V     |         |         |
11+15       2.3411      3.12  |   Q     |    V    |         |         |
11+20       2.3626      3.13  |   Q     |    V    |         |         |
11+25       2.3843      3.15  |   Q     |    V    |         |         |
11+30       2.4061      3.16  |   Q     |    V    |         |         |
11+35       2.4280      3.18  |   Q     |    V    |         |         |
11+40       2.4500      3.20  |   Q     |    V    |         |         |
11+45       2.4721      3.21  |   Q     |    V    |         |         |
11+50       2.4944      3.23  |   Q     |     V   |         |         |
11+55       2.5168      3.25  |   Q     |     V   |         |         |
12+ 0       2.5393      3.27  |   Q     |     V   |         |         |
12+ 5       2.5617      3.26  |   Q     |     V   |         |         |
12+10       2.5832      3.12  |   Q     |     V   |         |         |
12+15       2.6039      3.00  |   Q     |     V   |         |         |
12+20       2.6244      2.97  |  Q      |     V   |         |         |
12+25       2.6448      2.97  |  Q      |     V   |         |         |
12+30       2.6653      2.97  |  Q      |      V  |         |         |
12+35       2.6859      2.99  |  Q      |      V  |         |         |
12+40       2.7066      3.02  |   Q     |      V  |         |         |
12+45       2.7276      3.04  |   Q     |      V  |         |         |
12+50       2.7487      3.07  |   Q     |      V  |         |         |
12+55       2.7700      3.10  |   Q     |      V  |         |         |
13+ 0       2.7915      3.13  |   Q     |      V  |         |         |
13+ 5       2.8133      3.16  |   Q     |       V |         |         |
13+10       2.8353      3.19  |   Q     |       V |         |         |
13+15       2.8575      3.22  |   Q     |       V |         |         |
13+20       2.8799      3.26  |   Q     |       V |         |         |
13+25       2.9026      3.30  |   Q     |       V |         |         |
13+30       2.9256      3.34  |   Q     |       V |         |         |
13+35       2.9489      3.38  |   Q     |       V |         |         |
13+40       2.9724      3.42  |   Q     |        V|         |         |
13+45       2.9962      3.46  |   Q     |        V|         |         |
13+50       3.0204      3.51  |   Q     |        V|         |         |
13+55       3.0449      3.56  |   Q     |        V|         |         |
14+ 0       3.0697      3.61  |   Q     |        V|         |         |
14+ 5       3.0949      3.66  |   Q     |        V|         |         |
14+10       3.1206      3.72  |   Q     |         V         |         |
14+15       3.1466      3.78  |    Q    |         V         |         |
14+20       3.1730      3.84  |    Q    |         V         |         |
14+25       3.1999      3.91  |    Q    |         V         |         |
14+30       3.2274      3.98  |    Q    |         V         |         |
14+35       3.2553      4.06  |    Q    |         V         |         |
14+40       3.2838      4.14  |    Q    |         |V        |         |
14+45       3.3129      4.23  |    Q    |         |V        |         |
14+50       3.3427      4.33  |    Q    |         |V        |         |
14+55       3.3732      4.43  |    Q    |         |V        |         |
15+ 0       3.4045      4.54  |     Q   |         |V        |         |
15+ 5       3.4366      4.67  |     Q   |         | V       |         |
15+10       3.4697      4.81  |     Q   |         | V       |         |
15+15       3.5039      4.96  |     Q   |         | V       |         |
15+20       3.5393      5.14  |     Q   |         | V       |         |
15+25       3.5748      5.15  |     Q   |         | V       |         |
15+30       3.6045      4.32  |    Q    |         |  V      |         |
15+35       3.6296      3.64  |   Q     |         |  V      |         |
15+40       3.6545      3.62  |   Q     |         |  V      |         |
15+45       3.6808      3.82  |    Q    |         |  V      |         |
15+50       3.7103      4.29  |    Q    |         |  V      |         |
15+55       3.7453      5.07  |     Q   |         |   V     |         |
16+ 0       3.7916      6.74  |       Q |         |   V     |         |
16+ 5       3.8742     11.98  |         |    Q    |   V     |         |
16+10       4.0566     26.49  |         |         |     V   |    Q    |
16+15       4.2162     23.17  |         |         |      V  Q         |
16+20       4.2982     11.90  |         |    Q    |      V  |         |
16+25       4.3548      8.22  |         Q         |      V  |         |
16+30       4.4023      6.90  |        Q|         |       V |         |
16+35       4.4444      6.12  |       Q |         |       V |         |
16+40       4.4816      5.40  |      Q  |         |       V |         |
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 16+45       4.5165      5.07  |     Q   |         |       V |         |
 16+50       4.5499      4.84  |     Q   |         |        V|         |
 16+55       4.5812      4.54  |     Q   |         |        V|         |
 17+ 0       4.6102      4.21  |    Q    |         |        V|         |
 17+ 5       4.6380      4.04  |    Q    |         |        V|         |
 17+10       4.6649      3.90  |    Q    |         |        V|         |
 17+15       4.6909      3.78  |    Q    |         |         V         |
 17+20       4.7161      3.66  |   Q     |         |         V         |
 17+25       4.7406      3.55  |   Q     |         |         V         |
 17+30       4.7644      3.46  |   Q     |         |         V         |
 17+35       4.7876      3.37  |   Q     |         |         V         |
 17+40       4.8103      3.29  |   Q     |         |         V         |
 17+45       4.8325      3.22  |   Q     |         |         V         |
 17+50       4.8542      3.15  |   Q     |         |         |V        |
 17+55       4.8755      3.09  |   Q     |         |         |V        |
 18+ 0       4.8964      3.03  |   Q     |         |         |V        |
 18+ 5       4.9171      3.01  |   Q     |         |         |V        |
 18+10       4.9386      3.12  |   Q     |         |         |V        |
 18+15       4.9607      3.21  |   Q     |         |         |V        |
 18+20       4.9829      3.22  |   Q     |         |         |V        |
 18+25       5.0050      3.21  |   Q     |         |         | V       |
 18+30       5.0270      3.19  |   Q     |         |         | V       |
 18+35       5.0488      3.17  |   Q     |         |         | V       |
 18+40       5.0705      3.14  |   Q     |         |         | V       |
 18+45       5.0919      3.11  |   Q     |         |         | V       |
 18+50       5.1131      3.08  |   Q     |         |         | V       |
 18+55       5.1341      3.05  |   Q     |         |         | V       |
 19+ 0       5.1550      3.03  |   Q     |         |         |  V      |
 19+ 5       5.1757      3.00  |   Q     |         |         |  V      |
 19+10       5.1961      2.98  |  Q      |         |         |  V      |
 19+15       5.2165      2.95  |  Q      |         |         |  V      |
 19+20       5.2366      2.93  |  Q      |         |         |  V      |
 19+25       5.2566      2.90  |  Q      |         |         |  V      |
 19+30       5.2765      2.88  |  Q      |         |         |  V      |
 19+35       5.2962      2.86  |  Q      |         |         |  V      |
 19+40       5.3158      2.84  |  Q      |         |         |   V     |
 19+45       5.3352      2.82  |  Q      |         |         |   V     |
 19+50       5.3545      2.80  |  Q      |         |         |   V     |
 19+55       5.3737      2.78  |  Q      |         |         |   V     |
 20+ 0       5.3927      2.76  |  Q      |         |         |   V     |
 20+ 5       5.4116      2.75  |  Q      |         |         |   V     |
 20+10       5.4304      2.73  |  Q      |         |         |   V     |
 20+15       5.4491      2.71  |  Q      |         |         |   V     |
 20+20       5.4677      2.70  |  Q      |         |         |    V    |
 20+25       5.4862      2.68  |  Q      |         |         |    V    |
 20+30       5.5045      2.67  |  Q      |         |         |    V    |
 20+35       5.5228      2.65  |  Q      |         |         |    V    |
 20+40       5.5409      2.64  |  Q      |         |         |    V    |
 20+45       5.5590      2.62  |  Q      |         |         |    V    |
 20+50       5.5769      2.61  |  Q      |         |         |    V    |
 20+55       5.5948      2.59  |  Q      |         |         |    V    |
 21+ 0       5.6126      2.58  |  Q      |         |         |     V   |
 21+ 5       5.6302      2.57  |  Q      |         |         |     V   |
 21+10       5.6478      2.55  |  Q      |         |         |     V   |
 21+15       5.6653      2.54  |  Q      |         |         |     V   |
 21+20       5.6828      2.53  |  Q      |         |         |     V   |
 21+25       5.7001      2.52  |  Q      |         |         |     V   |
 21+30       5.7174      2.51  |  Q      |         |         |     V   |
 21+35       5.7345      2.49  |  Q      |         |         |     V   |
 21+40       5.7516      2.48  |  Q      |         |         |     V   |
 21+45       5.7687      2.47  |  Q      |         |         |      V  |
 21+50       5.7856      2.46  |  Q      |         |         |      V  |
 21+55       5.8025      2.45  |  Q      |         |         |      V  |
 22+ 0       5.8193      2.44  |  Q      |         |         |      V  |
 22+ 5       5.8360      2.43  |  Q      |         |         |      V  |
 22+10       5.8527      2.42  |  Q      |         |         |      V  |
 22+15       5.8693      2.41  |  Q      |         |         |      V  |
 22+20       5.8858      2.40  |  Q      |         |         |      V  |
 22+25       5.9023      2.39  |  Q      |         |         |      V  |
 22+30       5.9187      2.38  |  Q      |         |         |      V  |
 22+35       5.9350      2.37  |  Q      |         |         |       V |
```

```
   22+40       5.9513      2.36  |  Q      |         |         |       V |
   22+45       5.9675      2.35  |  Q      |         |         |       V |
   22+50       5.9837      2.35  |  Q      |         |         |       V |
   22+55       5.9998      2.34  |  Q      |         |         |       V |
   23+ 0       6.0158      2.33  |  Q      |         |         |       V |
   23+ 5       6.0318      2.32  |  Q      |         |         |       V |
   23+10       6.0477      2.31  |  Q      |         |         |       V |
   23+15       6.0636      2.30  |  Q      |         |         |       V |
   23+20       6.0794      2.30  |  Q      |         |         |       V |
   23+25       6.0951      2.29  |  Q      |         |         |        V|
   23+30       6.1109      2.28  |  Q      |         |         |        V|
   23+35       6.1265      2.27  |  Q      |         |         |        V|
   23+40       6.1421      2.27  |  Q      |         |         |        V|
   23+45       6.1577      2.26  |  Q      |         |         |        V|
   23+50       6.1732      2.25  |  Q      |         |         |        V|
   23+55       6.1886      2.24  | Q       |         |         |        V|
   24+ 0       6.2040      2.24  | Q       |         |         |        V|
   24+ 5       6.2184      2.09  | Q       |         |         |        V|
   24+10       6.2273      1.29  |Q        |         |         |        V|
   24+15       6.2313      0.58  Q         |         |         |        V|
   24+20       6.2334      0.32  Q         |         |         |        V|
   24+25       6.2346      0.17  Q         |         |         |        V|
   24+30       6.2352      0.08  Q         |         |         |        V|
   24+35       6.2355      0.04  Q         |         |         |        V|
   24+40       6.2357      0.03  Q         |         |         |        V|
   24+45       6.2358      0.02  Q         |         |         |        V|
   24+50       6.2358      0.01  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area ‘G’ – 2 Year 24 Hour - Existing Condition – Unit Hydrograph

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

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                Study date  11/14/24

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------------------------------------------------------------------------------

San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'G'
2 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 2

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            25.42            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      47.4         25.42      1.000     0.840    1.000    0.840

Area-averaged adjusted loss rate Fm (In/Hr) =  0.840

********* Area-Averaged low loss rate fraction, Yb **********
```

```
Area       Area          SCS CN    SCS CN      S     Pervious
 (Ac.)      Fract         (AMC2)    (AMC1)           Yield Fr
    25.42   1.000         67.0      47.4      11.10     0.062

Area-averaged catchment yield fraction, Y =  0.062
Area-averaged low loss fraction, Yb =  0.938
User entry of time of concentration  =   0.228 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area =      25.42(Ac.)
Catchment Lag time =   0.182 hours
Unit interval =   5.000 minutes
Unit interval percentage of lag time = 45.6871
Hydrograph baseflow =     0.00(CFS)
Average maximum watershed loss rate(Fm) =  0.840(In/Hr)
Average low loss rate fraction (Yb) = 0.938 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall =  0.309(In)
Computed peak 30-minute rainfall =  0.528(In)
Specified peak 1-hour rainfall =  0.651(In)
Computed peak 3-hour rainfall =  1.295(In)
Specified peak 6-hour rainfall =  2.000(In)
Specified peak 24-hour rainfall =  4.000(In)


Rainfall depth area reduction factors:
Using a total area of      25.42(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999     Adjusted rainfall =  0.308(In)
30-minute factor = 0.999    Adjusted rainfall =  0.528(In)
1-hour factor = 0.999       Adjusted rainfall =  0.650(In)
3-hour factor = 1.000       Adjusted rainfall =  1.295(In)
6-hour factor = 1.000       Adjusted rainfall =  2.000(In)
24-hour factor = 1.000      Adjusted rainfall =  4.000(In)
------------------------------------------------------------------------

                      U n i t  H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Interval          'S' Graph          Unit Hydrograph
Number            Mean values             ((CFS))
------------------------------------------------------------------------
               (K =       307.42 (CFS))

  1                3.770                  11.590
  2               19.507                  48.379
  3               57.188                 115.840
  4               74.099                  51.988
  5               83.072                  27.584
  6               89.001                  18.226
  7               93.088                  12.567
  8               95.822                   8.402
  9               97.540                   5.282
 10               98.307                   2.360
 11               98.797                   1.505
 12               99.152                   1.093
 13               99.469                   0.973
 14               99.765                   0.912
 15               99.923                   0.483
 16              100.000                   0.238
------------------------------------------------------------------------
Peak Unit   Adjusted mass rainfall  Unit rainfall
Number              (In)                (In)
  1              0.3083              0.3083
  2              0.3796              0.0713
  3              0.4287              0.0491
  4              0.4673              0.0386
  5              0.4997              0.0324
  6              0.5278              0.0281
  7              0.5527              0.0250
  8              0.5753              0.0226
  9              0.5960              0.0207
 10              0.6152              0.0191
```

11	0.6330	0.0178
12	0.6497	0.0167
13	0.6832	0.0335
14	0.7158	0.0325
15	0.7474	0.0317
16	0.7783	0.0309
17	0.8085	0.0302
18	0.8381	0.0295
19	0.8670	0.0289
20	0.8954	0.0284
21	0.9232	0.0278
22	0.9506	0.0274
23	0.9775	0.0269
24	1.0040	0.0265
25	1.0300	0.0261
26	1.0557	0.0257
27	1.0810	0.0253
28	1.1060	0.0250
29	1.1306	0.0246
30	1.1549	0.0243
31	1.1790	0.0240
32	1.2027	0.0237
33	1.2262	0.0235
34	1.2494	0.0232
35	1.2723	0.0229
36	1.2950	0.0227
37	1.3174	0.0224
38	1.3396	0.0222
39	1.3616	0.0220
40	1.3834	0.0218
41	1.4050	0.0216
42	1.4264	0.0214
43	1.4476	0.0212
44	1.4686	0.0210
45	1.4894	0.0208
46	1.5101	0.0207
47	1.5306	0.0205
48	1.5509	0.0203
49	1.5711	0.0202
50	1.5912	0.0200
51	1.6110	0.0199
52	1.6308	0.0197
53	1.6504	0.0196
54	1.6698	0.0195
55	1.6891	0.0193
56	1.7083	0.0192
57	1.7274	0.0191
58	1.7463	0.0189
59	1.7651	0.0188
60	1.7838	0.0187
61	1.8024	0.0186
62	1.8209	0.0185
63	1.8392	0.0184
64	1.8575	0.0182
65	1.8756	0.0181
66	1.8937	0.0180
67	1.9116	0.0179
68	1.9294	0.0178
69	1.9472	0.0177
70	1.9648	0.0176
71	1.9824	0.0176
72	1.9998	0.0175
73	2.0137	0.0138
74	2.0274	0.0137
75	2.0411	0.0137
76	2.0546	0.0136
77	2.0681	0.0135
78	2.0815	0.0134
79	2.0948	0.0133
80	2.1080	0.0132
81	2.1212	0.0131

82	2.1342	0.0131
83	2.1472	0.0130
84	2.1601	0.0129
85	2.1729	0.0128
86	2.1857	0.0127
87	2.1983	0.0127
88	2.2109	0.0126
89	2.2235	0.0125
90	2.2359	0.0125
91	2.2483	0.0124
92	2.2606	0.0123
93	2.2729	0.0123
94	2.2851	0.0122
95	2.2972	0.0121
96	2.3092	0.0121
97	2.3212	0.0120
98	2.3332	0.0119
99	2.3450	0.0119
100	2.3569	0.0118
101	2.3686	0.0118
102	2.3803	0.0117
103	2.3920	0.0116
104	2.4035	0.0116
105	2.4151	0.0115
106	2.4265	0.0115
107	2.4380	0.0114
108	2.4493	0.0114
109	2.4606	0.0113
110	2.4719	0.0113
111	2.4831	0.0112
112	2.4943	0.0112
113	2.5054	0.0111
114	2.5165	0.0111
115	2.5275	0.0110
116	2.5384	0.0110
117	2.5493	0.0109
118	2.5602	0.0109
119	2.5710	0.0108
120	2.5818	0.0108
121	2.5926	0.0107
122	2.6033	0.0107
123	2.6139	0.0106
124	2.6245	0.0106
125	2.6351	0.0106
126	2.6456	0.0105
127	2.6561	0.0105
128	2.6665	0.0104
129	2.6769	0.0104
130	2.6873	0.0104
131	2.6976	0.0103
132	2.7079	0.0103
133	2.7181	0.0102
134	2.7283	0.0102
135	2.7385	0.0102
136	2.7486	0.0101
137	2.7587	0.0101
138	2.7687	0.0101
139	2.7787	0.0100
140	2.7887	0.0100
141	2.7987	0.0099
142	2.8086	0.0099
143	2.8184	0.0099
144	2.8283	0.0098
145	2.8381	0.0098
146	2.8478	0.0098
147	2.8576	0.0097
148	2.8673	0.0097
149	2.8770	0.0097
150	2.8866	0.0096
151	2.8962	0.0096
152	2.9058	0.0096

153	2.9153	0.0095
154	2.9248	0.0095
155	2.9343	0.0095
156	2.9438	0.0095
157	2.9532	0.0094
158	2.9626	0.0094
159	2.9719	0.0094
160	2.9813	0.0093
161	2.9906	0.0093
162	2.9998	0.0093
163	3.0091	0.0092
164	3.0183	0.0092
165	3.0275	0.0092
166	3.0367	0.0092
167	3.0458	0.0091
168	3.0549	0.0091
169	3.0640	0.0091
170	3.0730	0.0091
171	3.0821	0.0090
172	3.0911	0.0090
173	3.1000	0.0090
174	3.1090	0.0089
175	3.1179	0.0089
176	3.1268	0.0089
177	3.1357	0.0089
178	3.1445	0.0088
179	3.1533	0.0088
180	3.1621	0.0088
181	3.1709	0.0088
182	3.1796	0.0087
183	3.1884	0.0087
184	3.1971	0.0087
185	3.2057	0.0087
186	3.2144	0.0087
187	3.2230	0.0086
188	3.2316	0.0086
189	3.2402	0.0086
190	3.2488	0.0086
191	3.2573	0.0085
192	3.2658	0.0085
193	3.2743	0.0085
194	3.2828	0.0085
195	3.2913	0.0085
196	3.2997	0.0084
197	3.3081	0.0084
198	3.3165	0.0084
199	3.3248	0.0084
200	3.3332	0.0083
201	3.3415	0.0083
202	3.3498	0.0083
203	3.3581	0.0083
204	3.3664	0.0083
205	3.3746	0.0082
206	3.3828	0.0082
207	3.3910	0.0082
208	3.3992	0.0082
209	3.4074	0.0082
210	3.4155	0.0081
211	3.4236	0.0081
212	3.4317	0.0081
213	3.4398	0.0081
214	3.4479	0.0081
215	3.4559	0.0080
216	3.4640	0.0080
217	3.4720	0.0080
218	3.4800	0.0080
219	3.4879	0.0080
220	3.4959	0.0080
221	3.5038	0.0079
222	3.5117	0.0079
223	3.5196	0.0079

224	3.5275	0.0079
225	3.5354	0.0079
226	3.5432	0.0078
227	3.5511	0.0078
228	3.5589	0.0078
229	3.5667	0.0078
230	3.5745	0.0078
231	3.5822	0.0078
232	3.5900	0.0077
233	3.5977	0.0077
234	3.6054	0.0077
235	3.6131	0.0077
236	3.6208	0.0077
237	3.6285	0.0077
238	3.6361	0.0076
239	3.6437	0.0076
240	3.6513	0.0076
241	3.6589	0.0076
242	3.6665	0.0076
243	3.6741	0.0076
244	3.6816	0.0076
245	3.6892	0.0075
246	3.6967	0.0075
247	3.7042	0.0075
248	3.7117	0.0075
249	3.7192	0.0075
250	3.7266	0.0075
251	3.7341	0.0074
252	3.7415	0.0074
253	3.7489	0.0074
254	3.7563	0.0074
255	3.7637	0.0074
256	3.7711	0.0074
257	3.7785	0.0074
258	3.7858	0.0073
259	3.7931	0.0073
260	3.8005	0.0073
261	3.8078	0.0073
262	3.8150	0.0073
263	3.8223	0.0073
264	3.8296	0.0073
265	3.8368	0.0072
266	3.8441	0.0072
267	3.8513	0.0072
268	3.8585	0.0072
269	3.8657	0.0072
270	3.8729	0.0072
271	3.8800	0.0072
272	3.8872	0.0072
273	3.8943	0.0071
274	3.9014	0.0071
275	3.9085	0.0071
276	3.9156	0.0071
277	3.9227	0.0071
278	3.9298	0.0071
279	3.9369	0.0071
280	3.9439	0.0070
281	3.9510	0.0070
282	3.9580	0.0070
283	3.9650	0.0070
284	3.9720	0.0070
285	3.9790	0.0070
286	3.9860	0.0070
287	3.9929	0.0070
288	3.9999	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0065	0.0004

2	0.0070	0.0065	0.0004
3	0.0070	0.0066	0.0004
4	0.0070	0.0066	0.0004
5	0.0070	0.0066	0.0004
6	0.0070	0.0066	0.0004
7	0.0071	0.0066	0.0004
8	0.0071	0.0066	0.0004
9	0.0071	0.0067	0.0004
10	0.0071	0.0067	0.0004
11	0.0071	0.0067	0.0004
12	0.0072	0.0067	0.0004
13	0.0072	0.0067	0.0004
14	0.0072	0.0067	0.0004
15	0.0072	0.0068	0.0004
16	0.0072	0.0068	0.0004
17	0.0073	0.0068	0.0004
18	0.0073	0.0068	0.0004
19	0.0073	0.0069	0.0004
20	0.0073	0.0069	0.0005
21	0.0073	0.0069	0.0005
22	0.0074	0.0069	0.0005
23	0.0074	0.0069	0.0005
24	0.0074	0.0069	0.0005
25	0.0074	0.0070	0.0005
26	0.0074	0.0070	0.0005
27	0.0075	0.0070	0.0005
28	0.0075	0.0070	0.0005
29	0.0075	0.0071	0.0005
30	0.0075	0.0071	0.0005
31	0.0076	0.0071	0.0005
32	0.0076	0.0071	0.0005
33	0.0076	0.0071	0.0005
34	0.0076	0.0072	0.0005
35	0.0077	0.0072	0.0005
36	0.0077	0.0072	0.0005
37	0.0077	0.0072	0.0005
38	0.0077	0.0073	0.0005
39	0.0078	0.0073	0.0005
40	0.0078	0.0073	0.0005
41	0.0078	0.0073	0.0005
42	0.0078	0.0073	0.0005
43	0.0079	0.0074	0.0005
44	0.0079	0.0074	0.0005
45	0.0079	0.0074	0.0005
46	0.0079	0.0074	0.0005
47	0.0080	0.0075	0.0005
48	0.0080	0.0075	0.0005
49	0.0080	0.0075	0.0005
50	0.0080	0.0076	0.0005
51	0.0081	0.0076	0.0005
52	0.0081	0.0076	0.0005
53	0.0081	0.0076	0.0005
54	0.0082	0.0077	0.0005
55	0.0082	0.0077	0.0005
56	0.0082	0.0077	0.0005
57	0.0083	0.0078	0.0005
58	0.0083	0.0078	0.0005
59	0.0083	0.0078	0.0005
60	0.0083	0.0078	0.0005
61	0.0084	0.0079	0.0005
62	0.0084	0.0079	0.0005
63	0.0085	0.0079	0.0005
64	0.0085	0.0080	0.0005
65	0.0085	0.0080	0.0005
66	0.0085	0.0080	0.0005
67	0.0086	0.0081	0.0005
68	0.0086	0.0081	0.0005
69	0.0087	0.0081	0.0005
70	0.0087	0.0081	0.0005
71	0.0087	0.0082	0.0005
72	0.0087	0.0082	0.0005

73	0.0088	0.0083	0.0005
74	0.0088	0.0083	0.0005
75	0.0089	0.0083	0.0005
76	0.0089	0.0083	0.0005
77	0.0089	0.0084	0.0006
78	0.0090	0.0084	0.0006
79	0.0090	0.0085	0.0006
80	0.0091	0.0085	0.0006
81	0.0091	0.0085	0.0006
82	0.0091	0.0086	0.0006
83	0.0092	0.0086	0.0006
84	0.0092	0.0086	0.0006
85	0.0093	0.0087	0.0006
86	0.0093	0.0087	0.0006
87	0.0094	0.0088	0.0006
88	0.0094	0.0088	0.0006
89	0.0095	0.0089	0.0006
90	0.0095	0.0089	0.0006
91	0.0095	0.0090	0.0006
92	0.0096	0.0090	0.0006
93	0.0096	0.0090	0.0006
94	0.0097	0.0091	0.0006
95	0.0097	0.0091	0.0006
96	0.0098	0.0092	0.0006
97	0.0098	0.0092	0.0006
98	0.0099	0.0093	0.0006
99	0.0099	0.0093	0.0006
100	0.0100	0.0094	0.0006
101	0.0101	0.0094	0.0006
102	0.0101	0.0095	0.0006
103	0.0102	0.0095	0.0006
104	0.0102	0.0096	0.0006
105	0.0103	0.0096	0.0006
106	0.0103	0.0097	0.0006
107	0.0104	0.0098	0.0006
108	0.0104	0.0098	0.0006
109	0.0105	0.0099	0.0006
110	0.0106	0.0099	0.0007
111	0.0106	0.0100	0.0007
112	0.0107	0.0100	0.0007
113	0.0108	0.0101	0.0007
114	0.0108	0.0102	0.0007
115	0.0109	0.0102	0.0007
116	0.0110	0.0103	0.0007
117	0.0111	0.0104	0.0007
118	0.0111	0.0104	0.0007
119	0.0112	0.0105	0.0007
120	0.0113	0.0106	0.0007
121	0.0114	0.0107	0.0007
122	0.0114	0.0107	0.0007
123	0.0115	0.0108	0.0007
124	0.0116	0.0109	0.0007
125	0.0117	0.0110	0.0007
126	0.0118	0.0110	0.0007
127	0.0119	0.0111	0.0007
128	0.0119	0.0112	0.0007
129	0.0121	0.0113	0.0007
130	0.0121	0.0114	0.0007
131	0.0123	0.0115	0.0008
132	0.0123	0.0116	0.0008
133	0.0125	0.0117	0.0008
134	0.0125	0.0118	0.0008
135	0.0127	0.0119	0.0008
136	0.0127	0.0120	0.0008
137	0.0129	0.0121	0.0008
138	0.0130	0.0122	0.0008
139	0.0131	0.0123	0.0008
140	0.0132	0.0124	0.0008
141	0.0134	0.0126	0.0008
142	0.0135	0.0126	0.0008
143	0.0137	0.0128	0.0008

144	0.0137	0.0129	0.0008
145	0.0175	0.0164	0.0011
146	0.0176	0.0165	0.0011
147	0.0177	0.0166	0.0011
148	0.0178	0.0167	0.0011
149	0.0180	0.0169	0.0011
150	0.0181	0.0170	0.0011
151	0.0184	0.0172	0.0011
152	0.0185	0.0173	0.0011
153	0.0187	0.0175	0.0012
154	0.0188	0.0177	0.0012
155	0.0191	0.0179	0.0012
156	0.0192	0.0180	0.0012
157	0.0195	0.0183	0.0012
158	0.0196	0.0184	0.0012
159	0.0199	0.0187	0.0012
160	0.0200	0.0188	0.0012
161	0.0203	0.0191	0.0013
162	0.0205	0.0192	0.0013
163	0.0208	0.0196	0.0013
164	0.0210	0.0197	0.0013
165	0.0214	0.0201	0.0013
166	0.0216	0.0203	0.0013
167	0.0220	0.0206	0.0014
168	0.0222	0.0208	0.0014
169	0.0227	0.0213	0.0014
170	0.0229	0.0215	0.0014
171	0.0235	0.0220	0.0014
172	0.0237	0.0223	0.0015
173	0.0243	0.0228	0.0015
174	0.0246	0.0231	0.0015
175	0.0253	0.0238	0.0016
176	0.0257	0.0241	0.0016
177	0.0265	0.0248	0.0016
178	0.0269	0.0252	0.0017
179	0.0278	0.0261	0.0017
180	0.0284	0.0266	0.0017
181	0.0295	0.0277	0.0018
182	0.0302	0.0283	0.0019
183	0.0317	0.0297	0.0020
184	0.0325	0.0305	0.0020
185	0.0167	0.0157	0.0010
186	0.0178	0.0167	0.0011
187	0.0207	0.0194	0.0013
188	0.0226	0.0212	0.0014
189	0.0281	0.0264	0.0017
190	0.0324	0.0304	0.0020
191	0.0491	0.0461	0.0030
192	0.0713	0.0669	0.0044
193	0.3083	0.0700	0.2383
194	0.0386	0.0363	0.0024
195	0.0250	0.0234	0.0015
196	0.0191	0.0180	0.0012
197	0.0335	0.0314	0.0021
198	0.0309	0.0290	0.0019
199	0.0289	0.0272	0.0018
200	0.0274	0.0257	0.0017
201	0.0261	0.0245	0.0016
202	0.0250	0.0234	0.0015
203	0.0240	0.0225	0.0015
204	0.0232	0.0218	0.0014
205	0.0224	0.0211	0.0014
206	0.0218	0.0204	0.0013
207	0.0212	0.0199	0.0013
208	0.0207	0.0194	0.0013
209	0.0202	0.0189	0.0012
210	0.0197	0.0185	0.0012
211	0.0193	0.0181	0.0012
212	0.0189	0.0178	0.0012
213	0.0186	0.0174	0.0011
214	0.0182	0.0171	0.0011

215	0.0179	0.0168	0.0011
216	0.0176	0.0166	0.0011
217	0.0138	0.0130	0.0009
218	0.0136	0.0127	0.0008
219	0.0133	0.0125	0.0008
220	0.0131	0.0123	0.0008
221	0.0128	0.0120	0.0008
222	0.0126	0.0118	0.0008
223	0.0124	0.0116	0.0008
224	0.0122	0.0114	0.0008
225	0.0120	0.0113	0.0007
226	0.0118	0.0111	0.0007
227	0.0116	0.0109	0.0007
228	0.0115	0.0108	0.0007
229	0.0113	0.0106	0.0007
230	0.0112	0.0105	0.0007
231	0.0110	0.0103	0.0007
232	0.0109	0.0102	0.0007
233	0.0107	0.0101	0.0007
234	0.0106	0.0100	0.0007
235	0.0105	0.0098	0.0006
236	0.0104	0.0097	0.0006
237	0.0102	0.0096	0.0006
238	0.0101	0.0095	0.0006
239	0.0100	0.0094	0.0006
240	0.0099	0.0093	0.0006
241	0.0098	0.0092	0.0006
242	0.0097	0.0091	0.0006
243	0.0096	0.0090	0.0006
244	0.0095	0.0089	0.0006
245	0.0094	0.0088	0.0006
246	0.0093	0.0088	0.0006
247	0.0092	0.0087	0.0006
248	0.0092	0.0086	0.0006
249	0.0091	0.0085	0.0006
250	0.0090	0.0084	0.0006
251	0.0089	0.0084	0.0005
252	0.0088	0.0083	0.0005
253	0.0088	0.0082	0.0005
254	0.0087	0.0082	0.0005
255	0.0086	0.0081	0.0005
256	0.0086	0.0080	0.0005
257	0.0085	0.0080	0.0005
258	0.0084	0.0079	0.0005
259	0.0084	0.0079	0.0005
260	0.0083	0.0078	0.0005
261	0.0082	0.0077	0.0005
262	0.0082	0.0077	0.0005
263	0.0081	0.0076	0.0005
264	0.0081	0.0076	0.0005
265	0.0080	0.0075	0.0005
266	0.0080	0.0075	0.0005
267	0.0079	0.0074	0.0005
268	0.0078	0.0074	0.0005
269	0.0078	0.0073	0.0005
270	0.0077	0.0073	0.0005
271	0.0077	0.0072	0.0005
272	0.0076	0.0072	0.0005
273	0.0076	0.0071	0.0005
274	0.0076	0.0071	0.0005
275	0.0075	0.0070	0.0005
276	0.0075	0.0070	0.0005
277	0.0074	0.0070	0.0005
278	0.0074	0.0069	0.0005
279	0.0073	0.0069	0.0005
280	0.0073	0.0068	0.0004
281	0.0072	0.0068	0.0004
282	0.0072	0.0068	0.0004
283	0.0072	0.0067	0.0004
284	0.0071	0.0067	0.0004
285	0.0071	0.0067	0.0004

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      286              0.0070           0.0066              0.0004
      287              0.0070           0.0066              0.0004
      288              0.0070           0.0065              0.0004
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      3.53(In)
      Total effective rainfall =      0.47(In)
      Peak flow rate in flood hydrograph =     28.14(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0000      0.00  Q         |          |          |          |
  0+10       0.0002      0.03  Q         |          |          |          |
  0+15       0.0007      0.08  Q         |          |          |          |
  0+20       0.0014      0.10  Q         |          |          |          |
  0+25       0.0022      0.11  Q         |          |          |          |
  0+30       0.0030      0.12  Q         |          |          |          |
  0+35       0.0038      0.12  Q         |          |          |          |
  0+40       0.0047      0.13  Q         |          |          |          |
  0+45       0.0056      0.13  Q         |          |          |          |
  0+50       0.0065      0.13  Q         |          |          |          |
  0+55       0.0074      0.13  Q         |          |          |          |
  1+ 0       0.0083      0.13  Q         |          |          |          |
  1+ 5       0.0093      0.13  Q         |          |          |          |
  1+10       0.0102      0.13  Q         |          |          |          |
  1+15       0.0111      0.14  Q         |          |          |          |
  1+20       0.0120      0.14  Q         |          |          |          |
  1+25       0.0130      0.14  Q         |          |          |          |
  1+30       0.0139      0.14  Q         |          |          |          |
  1+35       0.0149      0.14  Q         |          |          |          |
  1+40       0.0158      0.14  Q         |          |          |          |
  1+45       0.0168      0.14  Q         |          |          |          |
  1+50       0.0177      0.14  Q         |          |          |          |
  1+55       0.0187      0.14  Q         |          |          |          |
  2+ 0       0.0196      0.14  Q         |          |          |          |
  2+ 5       0.0206      0.14  Q         |          |          |          |
  2+10       0.0215      0.14  Q         |          |          |          |
  2+15       0.0225      0.14  Q         |          |          |          |
  2+20       0.0235      0.14  Q         |          |          |          |
  2+25       0.0245      0.14  Q         |          |          |          |
  2+30       0.0254      0.14  QV        |          |          |          |
  2+35       0.0264      0.14  QV        |          |          |          |
  2+40       0.0274      0.14  QV        |          |          |          |
  2+45       0.0284      0.14  QV        |          |          |          |
  2+50       0.0294      0.14  QV        |          |          |          |
  2+55       0.0303      0.14  QV        |          |          |          |
  3+ 0       0.0313      0.14  QV        |          |          |          |
  3+ 5       0.0323      0.14  QV        |          |          |          |
  3+10       0.0333      0.14  QV        |          |          |          |
  3+15       0.0343      0.15  QV        |          |          |          |
  3+20       0.0353      0.15  QV        |          |          |          |
  3+25       0.0363      0.15  QV        |          |          |          |
  3+30       0.0374      0.15  QV        |          |          |          |
  3+35       0.0384      0.15  QV        |          |          |          |
  3+40       0.0394      0.15  QV        |          |          |          |
  3+45       0.0404      0.15  QV        |          |          |          |
  3+50       0.0414      0.15  QV        |          |          |          |
  3+55       0.0425      0.15  QV        |          |          |          |
  4+ 0       0.0435      0.15  QV        |          |          |          |
  4+ 5       0.0445      0.15  QV        |          |          |          |
  4+10       0.0456      0.15  QV        |          |          |          |
  4+15       0.0466      0.15  QV        |          |          |          |
  4+20       0.0477      0.15  QV        |          |          |          |
  4+25       0.0487      0.15  QV        |          |          |          |
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4+30	0.0498	0.15	Q V	|	|	|	|
4+35	0.0508	0.15	Q V	|	|	|	|
4+40	0.0519	0.15	Q V	|	|	|	|
4+45	0.0529	0.15	Q V	|	|	|	|
4+50	0.0540	0.16	Q V	|	|	|	|
4+55	0.0551	0.16	Q V	|	|	|	|
5+ 0	0.0562	0.16	Q V	|	|	|	|
5+ 5	0.0572	0.16	Q V	|	|	|	|
5+10	0.0583	0.16	Q V	|	|	|	|
5+15	0.0594	0.16	Q V	|	|	|	|
5+20	0.0605	0.16	Q V	|	|	|	|
5+25	0.0616	0.16	Q V	|	|	|	|
5+30	0.0627	0.16	Q V	|	|	|	|
5+35	0.0638	0.16	Q V	|	|	|	|
5+40	0.0649	0.16	Q V	|	|	|	|
5+45	0.0660	0.16	Q V	|	|	|	|
5+50	0.0671	0.16	Q V	|	|	|	|
5+55	0.0683	0.16	Q V	|	|	|	|
6+ 0	0.0694	0.16	Q V	|	|	|	|
6+ 5	0.0705	0.16	Q V	|	|	|	|
6+10	0.0717	0.17	Q V	|	|	|	|
6+15	0.0728	0.17	Q V	|	|	|	|
6+20	0.0740	0.17	Q V	|	|	|	|
6+25	0.0751	0.17	Q V	|	|	|	|
6+30	0.0763	0.17	Q V	|	|	|	|
6+35	0.0774	0.17	Q V	|	|	|	|
6+40	0.0786	0.17	Q V	|	|	|	|
6+45	0.0798	0.17	Q V	|	|	|	|
6+50	0.0809	0.17	Q V	|	|	|	|
6+55	0.0821	0.17	Q V	|	|	|	|
7+ 0	0.0833	0.17	Q V	|	|	|	|
7+ 5	0.0845	0.17	Q V	|	|	|	|
7+10	0.0857	0.17	Q V	|	|	|	|
7+15	0.0869	0.17	Q V	|	|	|	|
7+20	0.0881	0.18	Q V	|	|	|	|
7+25	0.0893	0.18	Q V	|	|	|	|
7+30	0.0905	0.18	Q V	|	|	|	|
7+35	0.0918	0.18	Q V	|	|	|	|
7+40	0.0930	0.18	Q V	|	|	|	|
7+45	0.0942	0.18	Q V	|	|	|	|
7+50	0.0955	0.18	Q V	|	|	|	|
7+55	0.0967	0.18	Q V	|	|	|	|
8+ 0	0.0980	0.18	Q V	|	|	|	|
8+ 5	0.0992	0.18	Q V	|	|	|	|
8+10	0.1005	0.18	Q V	|	|	|	|
8+15	0.1018	0.19	Q V	|	|	|	|
8+20	0.1031	0.19	Q V	|	|	|	|
8+25	0.1044	0.19	Q V	|	|	|	|
8+30	0.1057	0.19	Q V	|	|	|	|
8+35	0.1070	0.19	Q V	|	|	|	|
8+40	0.1083	0.19	Q V	|	|	|	|
8+45	0.1096	0.19	Q V	|	|	|	|
8+50	0.1109	0.19	Q V	|	|	|	|
8+55	0.1122	0.19	Q V	|	|	|	|
9+ 0	0.1136	0.19	Q V	|	|	|	|
9+ 5	0.1149	0.20	Q V	|	|	|	|
9+10	0.1163	0.20	Q V	|	|	|	|
9+15	0.1176	0.20	Q V	|	|	|	|
9+20	0.1190	0.20	Q V	|	|	|	|
9+25	0.1204	0.20	Q V	|	|	|	|
9+30	0.1218	0.20	Q V	|	|	|	|
9+35	0.1232	0.20	Q V	|	|	|	|
9+40	0.1246	0.20	Q V	|	|	|	|
9+45	0.1260	0.21	Q V	|	|	|	|
9+50	0.1274	0.21	Q V	|	|	|	|
9+55	0.1288	0.21	Q V	|	|	|	|
10+ 0	0.1303	0.21	Q V	|	|	|	|
10+ 5	0.1317	0.21	Q V	|	|	|	|
10+10	0.1332	0.21	Q V	|	|	|	|
10+15	0.1347	0.21	Q V	|	|	|	|
10+20	0.1361	0.21	Q V	|	|	|	|

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10+25       0.1376      0.22  Q    V    |          |          |          |
10+30       0.1391      0.22  Q    V    |          |          |          |
10+35       0.1407      0.22  Q    V    |          |          |          |
10+40       0.1422      0.22  Q    V    |          |          |          |
10+45       0.1437      0.22  Q    V    |          |          |          |
10+50       0.1453      0.22  Q    V    |          |          |          |
10+55       0.1468      0.23  Q    V    |          |          |          |
11+ 0       0.1484      0.23  Q     V   |          |          |          |
11+ 5       0.1500      0.23  Q     V   |          |          |          |
11+10       0.1516      0.23  Q     V   |          |          |          |
11+15       0.1532      0.23  Q     V   |          |          |          |
11+20       0.1548      0.24  Q     V   |          |          |          |
11+25       0.1564      0.24  Q     V   |          |          |          |
11+30       0.1581      0.24  Q     V   |          |          |          |
11+35       0.1598      0.24  Q     V   |          |          |          |
11+40       0.1614      0.24  Q     V   |          |          |          |
11+45       0.1631      0.25  Q     V   |          |          |          |
11+50       0.1648      0.25  Q     V   |          |          |          |
11+55       0.1666      0.25  Q     V   |          |          |          |
12+ 0       0.1683      0.25  Q     V   |          |          |          |
12+ 5       0.1701      0.26  Q     V   |          |          |          |
12+10       0.1720      0.27  Q     V   |          |          |          |
12+15       0.1740      0.30  Q      V  |          |          |          |
12+20       0.1762      0.31  Q      V  |          |          |          |
12+25       0.1784      0.32  Q      V  |          |          |          |
12+30       0.1807      0.33  Q      V  |          |          |          |
12+35       0.1830      0.33  Q      V  |          |          |          |
12+40       0.1853      0.34  Q      V  |          |          |          |
12+45       0.1876      0.34  Q      V  |          |          |          |
12+50       0.1900      0.35  Q      V  |          |          |          |
12+55       0.1924      0.35  Q      V  |          |          |          |
13+ 0       0.1949      0.35  Q      V  |          |          |          |
13+ 5       0.1973      0.36  Q       V |          |          |          |
13+10       0.1998      0.36  Q       V |          |          |          |
13+15       0.2023      0.36  Q       V |          |          |          |
13+20       0.2049      0.37  Q       V |          |          |          |
13+25       0.2074      0.37  Q       V |          |          |          |
13+30       0.2100      0.38  Q       V |          |          |          |
13+35       0.2126      0.38  Q       V |          |          |          |
13+40       0.2153      0.38  Q       V |          |          |          |
13+45       0.2180      0.39  Q       V |          |          |          |
13+50       0.2207      0.39  Q       V |          |          |          |
13+55       0.2234      0.40  Q        V|          |          |          |
14+ 0       0.2262      0.40  Q        V|          |          |          |
14+ 5       0.2290      0.41  Q        V|          |          |          |
14+10       0.2319      0.42  Q        V|          |          |          |
14+15       0.2348      0.42  Q        V|          |          |          |
14+20       0.2378      0.43  Q        V|          |          |          |
14+25       0.2408      0.44  Q        V|          |          |          |
14+30       0.2438      0.44  Q        V|          |          |          |
14+35       0.2470      0.45  Q         V          |          |          |
14+40       0.2501      0.46  Q         V          |          |          |
14+45       0.2534      0.47  Q         V          |          |          |
14+50       0.2567      0.48  Q         V          |          |          |
14+55       0.2600      0.49  Q         V          |          |          |
15+ 0       0.2635      0.50  Q         V          |          |          |
15+ 5       0.2670      0.51  Q         V          |          |          |
15+10       0.2707      0.53  Q         V          |          |          |
15+15       0.2744      0.54  Q         |V         |          |          |
15+20       0.2783      0.56  Q         |V         |          |          |
15+25       0.2822      0.57  Q         |V         |          |          |
15+30       0.2859      0.54  Q         |V         |          |          |
15+35       0.2889      0.44  Q         |V         |          |          |
15+40       0.2918      0.41  Q         |V         |          |          |
15+45       0.2946      0.42  Q         |V         |          |          |
15+50       0.2977      0.45  Q         | V        |          |          |
15+55       0.3013      0.51  Q         | V        |          |          |
16+ 0       0.3056      0.63  Q         | V        |          |          |
16+ 5       0.3300      3.55  |   Q     |  V       |          |          |
16+10       0.4151     12.36  |         |     Q    |          |          |
16+15       0.6089     28.14  |         |          |   V      |      Q   |
```

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16+20       0.6983     12.99  |          |      Q   |        V |          |
16+25       0.7473      7.11  |          Q|          |          V          |
16+30       0.7807      4.85  |      Q    |          |          |V         |
16+35       0.8052      3.56  |    Q      |          |          | V        |
16+40       0.8228      2.56  |  Q        |          |          |  V       |
16+45       0.8353      1.80  | Q         |          |          |  V       |
16+50       0.8428      1.09  |Q          |          |          |   V      |
16+55       0.8487      0.87  |Q          |          |          |   V      |
17+ 0       0.8539      0.75  |Q          |          |          |   V      |
17+ 5       0.8588      0.71  Q           |          |          |   V      |
17+10       0.8634      0.67  Q           |          |          |    V     |
17+15       0.8672      0.56  Q           |          |          |    V     |
17+20       0.8706      0.48  Q           |          |          |    V     |
17+25       0.8734      0.41  Q           |          |          |    V     |
17+30       0.8762      0.40  Q           |          |          |    V     |
17+35       0.8789      0.39  Q           |          |          |    V     |
17+40       0.8815      0.38  Q           |          |          |    V     |
17+45       0.8841      0.37  Q           |          |          |    V     |
17+50       0.8866      0.37  Q           |          |          |    V     |
17+55       0.8891      0.36  Q           |          |          |     V    |
18+ 0       0.8915      0.35  Q           |          |          |     V    |
18+ 5       0.8939      0.34  Q           |          |          |     V    |
18+10       0.8962      0.33  Q           |          |          |     V    |
18+15       0.8982      0.30  Q           |          |          |     V    |
18+20       0.9001      0.28  Q           |          |          |     V    |
18+25       0.9020      0.27  Q           |          |          |     V    |
18+30       0.9038      0.26  Q           |          |          |     V    |
18+35       0.9055      0.25  Q           |          |          |     V    |
18+40       0.9072      0.25  Q           |          |          |     V    |
18+45       0.9088      0.24  Q           |          |          |     V    |
18+50       0.9105      0.24  Q           |          |          |     V    |
18+55       0.9121      0.23  Q           |          |          |      V   |
19+ 0       0.9136      0.23  Q           |          |          |      V   |
19+ 5       0.9152      0.22  Q           |          |          |      V   |
19+10       0.9167      0.22  Q           |          |          |      V   |
19+15       0.9182      0.22  Q           |          |          |      V   |
19+20       0.9197      0.21  Q           |          |          |      V   |
19+25       0.9211      0.21  Q           |          |          |      V   |
19+30       0.9225      0.21  Q           |          |          |      V   |
19+35       0.9240      0.21  Q           |          |          |      V   |
19+40       0.9254      0.20  Q           |          |          |      V   |
19+45       0.9267      0.20  Q           |          |          |      V   |
19+50       0.9281      0.20  Q           |          |          |      V   |
19+55       0.9295      0.20  Q           |          |          |      V   |
20+ 0       0.9308      0.19  Q           |          |          |      V   |
20+ 5       0.9321      0.19  Q           |          |          |      V   |
20+10       0.9334      0.19  Q           |          |          |      V   |
20+15       0.9347      0.19  Q           |          |          |      V   |
20+20       0.9360      0.19  Q           |          |          |      V   |
20+25       0.9373      0.18  Q           |          |          |       V  |
20+30       0.9385      0.18  Q           |          |          |       V  |
20+35       0.9397      0.18  Q           |          |          |       V  |
20+40       0.9410      0.18  Q           |          |          |       V  |
20+45       0.9422      0.18  Q           |          |          |       V  |
20+50       0.9434      0.17  Q           |          |          |       V  |
20+55       0.9446      0.17  Q           |          |          |       V  |
21+ 0       0.9458      0.17  Q           |          |          |       V  |
21+ 5       0.9469      0.17  Q           |          |          |       V  |
21+10       0.9481      0.17  Q           |          |          |       V  |
21+15       0.9493      0.17  Q           |          |          |       V  |
21+20       0.9504      0.17  Q           |          |          |       V  |
21+25       0.9515      0.16  Q           |          |          |       V  |
21+30       0.9527      0.16  Q           |          |          |       V  |
21+35       0.9538      0.16  Q           |          |          |       V  |
21+40       0.9549      0.16  Q           |          |          |       V  |
21+45       0.9560      0.16  Q           |          |          |       V  |
21+50       0.9571      0.16  Q           |          |          |       V  |
21+55       0.9581      0.16  Q           |          |          |       V  |
22+ 0       0.9592      0.16  Q           |          |          |       V  |
22+ 5       0.9603      0.15  Q           |          |          |       V  |
22+10       0.9613      0.15  Q           |          |          |        V |
```

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  22+15      0.9624      0.15  Q         |         |         |         V|
  22+20      0.9634      0.15  Q         |         |         |         V|
  22+25      0.9645      0.15  Q         |         |         |         V|
  22+30      0.9655      0.15  Q         |         |         |         V|
  22+35      0.9665      0.15  Q         |         |         |         V|
  22+40      0.9675      0.15  Q         |         |         |         V|
  22+45      0.9686      0.15  Q         |         |         |         V|
  22+50      0.9696      0.15  Q         |         |         |         V|
  22+55      0.9706      0.14  Q         |         |         |         V|
  23+ 0      0.9715      0.14  Q         |         |         |         V|
  23+ 5      0.9725      0.14  Q         |         |         |         V|
  23+10      0.9735      0.14  Q         |         |         |         V|
  23+15      0.9745      0.14  Q         |         |         |         V|
  23+20      0.9754      0.14  Q         |         |         |         V|
  23+25      0.9764      0.14  Q         |         |         |         V|
  23+30      0.9774      0.14  Q         |         |         |         V|
  23+35      0.9783      0.14  Q         |         |         |         V|
  23+40      0.9793      0.14  Q         |         |         |         V|
  23+45      0.9802      0.14  Q         |         |         |         V|
  23+50      0.9811      0.14  Q         |         |         |         V|
  23+55      0.9821      0.13  Q         |         |         |         V|
  24+ 0      0.9830      0.13  Q         |         |         |         V|
  24+ 5      0.9839      0.13  Q         |         |         |         V|
  24+10      0.9846      0.11  Q         |         |         |         V|
  24+15      0.9850      0.06  Q         |         |         |         V|
  24+20      0.9852      0.03  Q         |         |         |         V|
  24+25      0.9854      0.02  Q         |         |         |         V|
  24+30      0.9855      0.01  Q         |         |         |         V|
  24+35      0.9855      0.01  Q         |         |         |         V|
  24+40      0.9856      0.01  Q         |         |         |         V|
  24+45      0.9856      0.00  Q         |         |         |         V|
  24+50      0.9856      0.00  Q         |         |         |         V|
  24+55      0.9856      0.00  Q         |         |         |         V|
  25+ 0      0.9856      0.00  Q         |         |         |         V|
  25+ 5      0.9856      0.00  Q         |         |         |         V|
  25+10      0.9856      0.00  Q         |         |         |         V|
  25+15      0.9857      0.00  Q         |         |         |         V|
-------------------------------------------------------------------------
```

Area ‘G’ – 5 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/14/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'G'
5 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            25.42            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      47.4         25.42      1.000     0.840    1.000    0.840

Area-averaged adjusted loss rate Fm (In/Hr) =  0.840

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
25.42	1.000	67.0	47.4	11.10	0.154

Area-averaged catchment yield fraction, Y = 0.154
Area-averaged low loss fraction, Yb = 0.846
User entry of time of concentration = 0.228 (hours)
++
Watershed area = 25.42(Ac.)
Catchment Lag time = 0.182 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 45.6871
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.840(In/Hr)
Average low loss rate fraction (Yb) = 0.846 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 25.42(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.403(In)
30-minute factor = 0.999 Adjusted rainfall = 0.689(In)
1-hour factor = 0.999 Adjusted rainfall = 0.848(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.585(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 307.42 (CFS))	
1	3.770	11.590
2	19.507	48.379
3	57.188	115.840
4	74.099	51.988
5	83.072	27.584
6	89.001	18.226
7	93.088	12.567
8	95.822	8.402
9	97.540	5.282
10	98.307	2.360
11	98.797	1.505
12	99.152	1.093
13	99.469	0.973
14	99.765	0.912
15	99.923	0.483
16	100.000	0.238

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4026	0.4026
2	0.4957	0.0931
3	0.5598	0.0641
4	0.6102	0.0505
5	0.6525	0.0422
6	0.6892	0.0367
7	0.7218	0.0326
8	0.7513	0.0295
9	0.7783	0.0270
10	0.8033	0.0250

11	0.8266	0.0233
12	0.8485	0.0219
13	0.8918	0.0433
14	0.9339	0.0421
15	0.9748	0.0410
16	1.0148	0.0399
17	1.0538	0.0390
18	1.0919	0.0381
19	1.1293	0.0374
20	1.1659	0.0366
21	1.2018	0.0359
22	1.2371	0.0353
23	1.2718	0.0347
24	1.3060	0.0341
25	1.3395	0.0336
26	1.3726	0.0331
27	1.4052	0.0326
28	1.4374	0.0322
29	1.4691	0.0317
30	1.5004	0.0313
31	1.5314	0.0309
32	1.5619	0.0305
33	1.5921	0.0302
34	1.6220	0.0298
35	1.6515	0.0295
36	1.6807	0.0292
37	1.7095	0.0289
38	1.7381	0.0286
39	1.7664	0.0283
40	1.7944	0.0280
41	1.8221	0.0277
42	1.8496	0.0275
43	1.8768	0.0272
44	1.9039	0.0270
45	1.9306	0.0268
46	1.9572	0.0265
47	1.9835	0.0263
48	2.0096	0.0261
49	2.0355	0.0259
50	2.0612	0.0257
51	2.0867	0.0255
52	2.1121	0.0253
53	2.1372	0.0251
54	2.1622	0.0250
55	2.1870	0.0248
56	2.2116	0.0246
57	2.2361	0.0245
58	2.2603	0.0243
59	2.2845	0.0241
60	2.3085	0.0240
61	2.3323	0.0238
62	2.3560	0.0237
63	2.3795	0.0235
64	2.4029	0.0234
65	2.4262	0.0233
66	2.4493	0.0231
67	2.4723	0.0230
68	2.4952	0.0229
69	2.5179	0.0227
70	2.5405	0.0226
71	2.5630	0.0225
72	2.5854	0.0224
73	2.6066	0.0212
74	2.6276	0.0211
75	2.6486	0.0210
76	2.6694	0.0208
77	2.6902	0.0207
78	2.7108	0.0206
79	2.7313	0.0205
80	2.7517	0.0204
81	2.7720	0.0203

82	2.7922	0.0202
83	2.8124	0.0201
84	2.8324	0.0200
85	2.8523	0.0199
86	2.8721	0.0198
87	2.8918	0.0197
88	2.9114	0.0196
89	2.9310	0.0195
90	2.9504	0.0194
91	2.9698	0.0194
92	2.9891	0.0193
93	3.0083	0.0192
94	3.0274	0.0191
95	3.0464	0.0190
96	3.0653	0.0189
97	3.0842	0.0189
98	3.1030	0.0188
99	3.1217	0.0187
100	3.1403	0.0186
101	3.1589	0.0186
102	3.1773	0.0185
103	3.1957	0.0184
104	3.2141	0.0183
105	3.2323	0.0183
106	3.2505	0.0182
107	3.2686	0.0181
108	3.2867	0.0180
109	3.3046	0.0180
110	3.3226	0.0179
111	3.3404	0.0178
112	3.3582	0.0178
113	3.3759	0.0177
114	3.3936	0.0177
115	3.4111	0.0176
116	3.4287	0.0175
117	3.4461	0.0175
118	3.4635	0.0174
119	3.4809	0.0173
120	3.4982	0.0173
121	3.5154	0.0172
122	3.5326	0.0172
123	3.5497	0.0171
124	3.5667	0.0171
125	3.5837	0.0170
126	3.6007	0.0169
127	3.6176	0.0169
128	3.6344	0.0168
129	3.6512	0.0168
130	3.6679	0.0167
131	3.6846	0.0167
132	3.7012	0.0166
133	3.7178	0.0166
134	3.7343	0.0165
135	3.7508	0.0165
136	3.7672	0.0164
137	3.7836	0.0164
138	3.7999	0.0163
139	3.8162	0.0163
140	3.8324	0.0162
141	3.8486	0.0162
142	3.8647	0.0161
143	3.8808	0.0161
144	3.8968	0.0160
145	3.9128	0.0160
146	3.9288	0.0160
147	3.9447	0.0159
148	3.9606	0.0159
149	3.9764	0.0158
150	3.9922	0.0158
151	4.0079	0.0157
152	4.0236	0.0157

153	4.0392	0.0156
154	4.0548	0.0156
155	4.0704	0.0156
156	4.0859	0.0155
157	4.1014	0.0155
158	4.1168	0.0154
159	4.1323	0.0154
160	4.1476	0.0154
161	4.1629	0.0153
162	4.1782	0.0153
163	4.1935	0.0152
164	4.2087	0.0152
165	4.2239	0.0152
166	4.2390	0.0151
167	4.2541	0.0151
168	4.2691	0.0151
169	4.2842	0.0150
170	4.2992	0.0150
171	4.3141	0.0150
172	4.3290	0.0149
173	4.3439	0.0149
174	4.3588	0.0148
175	4.3736	0.0148
176	4.3883	0.0148
177	4.4031	0.0147
178	4.4178	0.0147
179	4.4325	0.0147
180	4.4471	0.0146
181	4.4617	0.0146
182	4.4763	0.0146
183	4.4908	0.0145
184	4.5053	0.0145
185	4.5198	0.0145
186	4.5343	0.0144
187	4.5487	0.0144
188	4.5631	0.0144
189	4.5774	0.0144
190	4.5917	0.0143
191	4.6060	0.0143
192	4.6203	0.0143
193	4.6345	0.0142
194	4.6487	0.0142
195	4.6629	0.0142
196	4.6770	0.0141
197	4.6911	0.0141
198	4.7052	0.0141
199	4.7193	0.0141
200	4.7333	0.0140
201	4.7473	0.0140
202	4.7613	0.0140
203	4.7752	0.0139
204	4.7891	0.0139
205	4.8030	0.0139
206	4.8168	0.0139
207	4.8307	0.0138
208	4.8445	0.0138
209	4.8582	0.0138
210	4.8720	0.0137
211	4.8857	0.0137
212	4.8994	0.0137
213	4.9131	0.0137
214	4.9267	0.0136
215	4.9403	0.0136
216	4.9539	0.0136
217	4.9675	0.0136
218	4.9810	0.0135
219	4.9945	0.0135
220	5.0080	0.0135
221	5.0215	0.0135
222	5.0349	0.0134
223	5.0483	0.0134

224	5.0617	0.0134
225	5.0751	0.0134
226	5.0884	0.0133
227	5.1017	0.0133
228	5.1150	0.0133
229	5.1283	0.0133
230	5.1415	0.0132
231	5.1548	0.0132
232	5.1680	0.0132
233	5.1811	0.0132
234	5.1943	0.0132
235	5.2074	0.0131
236	5.2205	0.0131
237	5.2336	0.0131
238	5.2467	0.0131
239	5.2597	0.0130
240	5.2727	0.0130
241	5.2857	0.0130
242	5.2987	0.0130
243	5.3116	0.0129
244	5.3246	0.0129
245	5.3375	0.0129
246	5.3503	0.0129
247	5.3632	0.0129
248	5.3761	0.0128
249	5.3889	0.0128
250	5.4017	0.0128
251	5.4145	0.0128
252	5.4272	0.0128
253	5.4400	0.0127
254	5.4527	0.0127
255	5.4654	0.0127
256	5.4780	0.0127
257	5.4907	0.0127
258	5.5033	0.0126
259	5.5160	0.0126
260	5.5286	0.0126
261	5.5411	0.0126
262	5.5537	0.0126
263	5.5662	0.0125
264	5.5787	0.0125
265	5.5912	0.0125
266	5.6037	0.0125
267	5.6162	0.0125
268	5.6286	0.0124
269	5.6410	0.0124
270	5.6534	0.0124
271	5.6658	0.0124
272	5.6782	0.0124
273	5.6905	0.0123
274	5.7029	0.0123
275	5.7152	0.0123
276	5.7275	0.0123
277	5.7398	0.0123
278	5.7520	0.0123
279	5.7643	0.0122
280	5.7765	0.0122
281	5.7887	0.0122
282	5.8009	0.0122
283	5.8130	0.0122
284	5.8252	0.0122
285	5.8373	0.0121
286	5.8494	0.0121
287	5.8615	0.0121
288	5.8736	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0102	0.0019

2	0.0121	0.0102	0.0019
3	0.0121	0.0103	0.0019
4	0.0122	0.0103	0.0019
5	0.0122	0.0103	0.0019
6	0.0122	0.0103	0.0019
7	0.0122	0.0104	0.0019
8	0.0123	0.0104	0.0019
9	0.0123	0.0104	0.0019
10	0.0123	0.0104	0.0019
11	0.0123	0.0104	0.0019
12	0.0124	0.0105	0.0019
13	0.0124	0.0105	0.0019
14	0.0124	0.0105	0.0019
15	0.0125	0.0105	0.0019
16	0.0125	0.0106	0.0019
17	0.0125	0.0106	0.0019
18	0.0125	0.0106	0.0019
19	0.0126	0.0106	0.0019
20	0.0126	0.0107	0.0019
21	0.0126	0.0107	0.0019
22	0.0127	0.0107	0.0020
23	0.0127	0.0107	0.0020
24	0.0127	0.0108	0.0020
25	0.0128	0.0108	0.0020
26	0.0128	0.0108	0.0020
27	0.0128	0.0108	0.0020
28	0.0128	0.0109	0.0020
29	0.0129	0.0109	0.0020
30	0.0129	0.0109	0.0020
31	0.0129	0.0110	0.0020
32	0.0130	0.0110	0.0020
33	0.0130	0.0110	0.0020
34	0.0130	0.0110	0.0020
35	0.0131	0.0111	0.0020
36	0.0131	0.0111	0.0020
37	0.0132	0.0111	0.0020
38	0.0132	0.0111	0.0020
39	0.0132	0.0112	0.0020
40	0.0132	0.0112	0.0020
41	0.0133	0.0112	0.0020
42	0.0133	0.0113	0.0021
43	0.0134	0.0113	0.0021
44	0.0134	0.0113	0.0021
45	0.0134	0.0114	0.0021
46	0.0135	0.0114	0.0021
47	0.0135	0.0114	0.0021
48	0.0135	0.0115	0.0021
49	0.0136	0.0115	0.0021
50	0.0136	0.0115	0.0021
51	0.0137	0.0116	0.0021
52	0.0137	0.0116	0.0021
53	0.0137	0.0116	0.0021
54	0.0138	0.0117	0.0021
55	0.0138	0.0117	0.0021
56	0.0139	0.0117	0.0021
57	0.0139	0.0118	0.0021
58	0.0139	0.0118	0.0021
59	0.0140	0.0118	0.0022
60	0.0140	0.0119	0.0022
61	0.0141	0.0119	0.0022
62	0.0141	0.0119	0.0022
63	0.0142	0.0120	0.0022
64	0.0142	0.0120	0.0022
65	0.0143	0.0121	0.0022
66	0.0143	0.0121	0.0022
67	0.0144	0.0121	0.0022
68	0.0144	0.0122	0.0022
69	0.0144	0.0122	0.0022
70	0.0145	0.0122	0.0022
71	0.0145	0.0123	0.0022
72	0.0146	0.0123	0.0022

73	0.0146	0.0124	0.0023
74	0.0147	0.0124	0.0023
75	0.0147	0.0125	0.0023
76	0.0148	0.0125	0.0023
77	0.0148	0.0126	0.0023
78	0.0149	0.0126	0.0023
79	0.0150	0.0126	0.0023
80	0.0150	0.0127	0.0023
81	0.0151	0.0127	0.0023
82	0.0151	0.0128	0.0023
83	0.0152	0.0128	0.0023
84	0.0152	0.0129	0.0023
85	0.0153	0.0129	0.0024
86	0.0153	0.0130	0.0024
87	0.0154	0.0130	0.0024
88	0.0154	0.0131	0.0024
89	0.0155	0.0131	0.0024
90	0.0156	0.0132	0.0024
91	0.0156	0.0132	0.0024
92	0.0157	0.0133	0.0024
93	0.0158	0.0133	0.0024
94	0.0158	0.0134	0.0024
95	0.0159	0.0135	0.0025
96	0.0160	0.0135	0.0025
97	0.0160	0.0136	0.0025
98	0.0161	0.0136	0.0025
99	0.0162	0.0137	0.0025
100	0.0162	0.0137	0.0025
101	0.0163	0.0138	0.0025
102	0.0164	0.0138	0.0025
103	0.0165	0.0139	0.0025
104	0.0165	0.0140	0.0025
105	0.0166	0.0141	0.0026
106	0.0167	0.0141	0.0026
107	0.0168	0.0142	0.0026
108	0.0168	0.0142	0.0026
109	0.0169	0.0143	0.0026
110	0.0170	0.0144	0.0026
111	0.0171	0.0145	0.0026
112	0.0172	0.0145	0.0026
113	0.0173	0.0146	0.0027
114	0.0173	0.0147	0.0027
115	0.0175	0.0148	0.0027
116	0.0175	0.0148	0.0027
117	0.0177	0.0149	0.0027
118	0.0177	0.0150	0.0027
119	0.0178	0.0151	0.0028
120	0.0179	0.0152	0.0028
121	0.0180	0.0153	0.0028
122	0.0181	0.0153	0.0028
123	0.0183	0.0154	0.0028
124	0.0183	0.0155	0.0028
125	0.0185	0.0156	0.0028
126	0.0186	0.0157	0.0029
127	0.0187	0.0158	0.0029
128	0.0188	0.0159	0.0029
129	0.0189	0.0160	0.0029
130	0.0190	0.0161	0.0029
131	0.0192	0.0162	0.0030
132	0.0193	0.0163	0.0030
133	0.0194	0.0165	0.0030
134	0.0195	0.0165	0.0030
135	0.0197	0.0167	0.0030
136	0.0198	0.0168	0.0031
137	0.0200	0.0169	0.0031
138	0.0201	0.0170	0.0031
139	0.0203	0.0172	0.0031
140	0.0204	0.0173	0.0031
141	0.0206	0.0174	0.0032
142	0.0207	0.0175	0.0032
143	0.0210	0.0177	0.0032

144	0.0211	0.0178	0.0032
145	0.0224	0.0189	0.0034
146	0.0225	0.0190	0.0035
147	0.0227	0.0192	0.0035
148	0.0229	0.0193	0.0035
149	0.0231	0.0196	0.0036
150	0.0233	0.0197	0.0036
151	0.0235	0.0199	0.0036
152	0.0237	0.0200	0.0037
153	0.0240	0.0203	0.0037
154	0.0241	0.0204	0.0037
155	0.0245	0.0207	0.0038
156	0.0246	0.0208	0.0038
157	0.0250	0.0211	0.0038
158	0.0251	0.0213	0.0039
159	0.0255	0.0216	0.0039
160	0.0257	0.0217	0.0040
161	0.0261	0.0221	0.0040
162	0.0263	0.0223	0.0041
163	0.0268	0.0226	0.0041
164	0.0270	0.0228	0.0042
165	0.0275	0.0233	0.0042
166	0.0277	0.0235	0.0043
167	0.0283	0.0239	0.0044
168	0.0286	0.0242	0.0044
169	0.0292	0.0247	0.0045
170	0.0295	0.0250	0.0045
171	0.0302	0.0255	0.0047
172	0.0305	0.0258	0.0047
173	0.0313	0.0265	0.0048
174	0.0317	0.0268	0.0049
175	0.0326	0.0276	0.0050
176	0.0331	0.0280	0.0051
177	0.0341	0.0289	0.0053
178	0.0347	0.0293	0.0053
179	0.0359	0.0304	0.0055
180	0.0366	0.0310	0.0056
181	0.0381	0.0323	0.0059
182	0.0390	0.0330	0.0060
183	0.0410	0.0346	0.0063
184	0.0421	0.0356	0.0065
185	0.0219	0.0185	0.0034
186	0.0233	0.0197	0.0036
187	0.0270	0.0229	0.0042
188	0.0295	0.0250	0.0045
189	0.0367	0.0310	0.0057
190	0.0422	0.0357	0.0065
191	0.0641	0.0542	0.0099
192	0.0931	0.0700	0.0231
193	0.4026	0.0700	0.3326
194	0.0505	0.0427	0.0078
195	0.0326	0.0276	0.0050
196	0.0250	0.0211	0.0039
197	0.0433	0.0366	0.0067
198	0.0399	0.0338	0.0062
199	0.0374	0.0316	0.0058
200	0.0353	0.0299	0.0054
201	0.0336	0.0284	0.0052
202	0.0322	0.0272	0.0050
203	0.0309	0.0262	0.0048
204	0.0298	0.0252	0.0046
205	0.0289	0.0244	0.0044
206	0.0280	0.0237	0.0043
207	0.0272	0.0230	0.0042
208	0.0265	0.0225	0.0041
209	0.0259	0.0219	0.0040
210	0.0253	0.0214	0.0039
211	0.0248	0.0210	0.0038
212	0.0243	0.0205	0.0037
213	0.0238	0.0202	0.0037
214	0.0234	0.0198	0.0036

215	0.0230	0.0194	0.0035
216	0.0226	0.0191	0.0035
217	0.0212	0.0179	0.0033
218	0.0208	0.0176	0.0032
219	0.0205	0.0174	0.0032
220	0.0202	0.0171	0.0031
221	0.0199	0.0168	0.0031
222	0.0196	0.0166	0.0030
223	0.0194	0.0164	0.0030
224	0.0191	0.0162	0.0029
225	0.0189	0.0160	0.0029
226	0.0186	0.0158	0.0029
227	0.0184	0.0156	0.0028
228	0.0182	0.0154	0.0028
229	0.0180	0.0152	0.0028
230	0.0178	0.0150	0.0027
231	0.0176	0.0149	0.0027
232	0.0174	0.0147	0.0027
233	0.0172	0.0146	0.0027
234	0.0171	0.0144	0.0026
235	0.0169	0.0143	0.0026
236	0.0167	0.0141	0.0026
237	0.0166	0.0140	0.0026
238	0.0164	0.0139	0.0025
239	0.0163	0.0138	0.0025
240	0.0161	0.0136	0.0025
241	0.0160	0.0135	0.0025
242	0.0159	0.0134	0.0024
243	0.0157	0.0133	0.0024
244	0.0156	0.0132	0.0024
245	0.0155	0.0131	0.0024
246	0.0154	0.0130	0.0024
247	0.0152	0.0129	0.0024
248	0.0151	0.0128	0.0023
249	0.0150	0.0127	0.0023
250	0.0149	0.0126	0.0023
251	0.0148	0.0125	0.0023
252	0.0147	0.0124	0.0023
253	0.0146	0.0124	0.0023
254	0.0145	0.0123	0.0022
255	0.0144	0.0122	0.0022
256	0.0143	0.0121	0.0022
257	0.0142	0.0120	0.0022
258	0.0141	0.0120	0.0022
259	0.0141	0.0119	0.0022
260	0.0140	0.0118	0.0022
261	0.0139	0.0117	0.0021
262	0.0138	0.0117	0.0021
263	0.0137	0.0116	0.0021
264	0.0136	0.0115	0.0021
265	0.0136	0.0115	0.0021
266	0.0135	0.0114	0.0021
267	0.0134	0.0113	0.0021
268	0.0133	0.0113	0.0021
269	0.0133	0.0112	0.0020
270	0.0132	0.0112	0.0020
271	0.0131	0.0111	0.0020
272	0.0131	0.0110	0.0020
273	0.0130	0.0110	0.0020
274	0.0129	0.0109	0.0020
275	0.0129	0.0109	0.0020
276	0.0128	0.0108	0.0020
277	0.0127	0.0108	0.0020
278	0.0127	0.0107	0.0020
279	0.0126	0.0107	0.0019
280	0.0126	0.0106	0.0019
281	0.0125	0.0106	0.0019
282	0.0124	0.0105	0.0019
283	0.0124	0.0105	0.0019
284	0.0123	0.0104	0.0019
285	0.0123	0.0104	0.0019

```
      286              0.0122           0.0103              0.0019
      287              0.0122           0.0103              0.0019
      288              0.0121           0.0102              0.0019
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      4.69(In)
      Total effective rainfall =      1.18(In)
      Peak flow rate in flood hydrograph =     40.72(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       12.5      25.0      37.5      50.0
----------------------------------------------------------------------------
  0+ 5       0.0001      0.02  Q         |         |         |         |
  0+10       0.0009      0.11  Q         |         |         |         |
  0+15       0.0032      0.33  Q         |         |         |         |
  0+20       0.0061      0.42  Q         |         |         |         |
  0+25       0.0094      0.48  Q         |         |         |         |
  0+30       0.0129      0.51  Q         |         |         |         |
  0+35       0.0166      0.54  Q         |         |         |         |
  0+40       0.0204      0.55  Q         |         |         |         |
  0+45       0.0243      0.56  Q         |         |         |         |
  0+50       0.0282      0.57  Q         |         |         |         |
  0+55       0.0322      0.57  Q         |         |         |         |
  1+ 0       0.0362      0.58  Q         |         |         |         |
  1+ 5       0.0402      0.58  Q         |         |         |         |
  1+10       0.0442      0.58  Q         |         |         |         |
  1+15       0.0482      0.59  Q         |         |         |         |
  1+20       0.0523      0.59  Q         |         |         |         |
  1+25       0.0563      0.59  Q         |         |         |         |
  1+30       0.0604      0.59  Q         |         |         |         |
  1+35       0.0645      0.59  QV        |         |         |         |
  1+40       0.0686      0.59  QV        |         |         |         |
  1+45       0.0726      0.59  QV        |         |         |         |
  1+50       0.0768      0.60  QV        |         |         |         |
  1+55       0.0809      0.60  QV        |         |         |         |
  2+ 0       0.0850      0.60  QV        |         |         |         |
  2+ 5       0.0891      0.60  QV        |         |         |         |
  2+10       0.0933      0.60  QV        |         |         |         |
  2+15       0.0974      0.60  QV        |         |         |         |
  2+20       0.1016      0.60  QV        |         |         |         |
  2+25       0.1058      0.61  QV        |         |         |         |
  2+30       0.1099      0.61  QV        |         |         |         |
  2+35       0.1141      0.61  QV        |         |         |         |
  2+40       0.1183      0.61  QV        |         |         |         |
  2+45       0.1225      0.61  QV        |         |         |         |
  2+50       0.1268      0.61  Q V       |         |         |         |
  2+55       0.1310      0.62  Q V       |         |         |         |
  3+ 0       0.1353      0.62  Q V       |         |         |         |
  3+ 5       0.1395      0.62  Q V       |         |         |         |
  3+10       0.1438      0.62  Q V       |         |         |         |
  3+15       0.1481      0.62  Q V       |         |         |         |
  3+20       0.1524      0.62  Q V       |         |         |         |
  3+25       0.1567      0.62  Q V       |         |         |         |
  3+30       0.1610      0.63  Q V       |         |         |         |
  3+35       0.1653      0.63  Q V       |         |         |         |
  3+40       0.1696      0.63  Q V       |         |         |         |
  3+45       0.1740      0.63  Q V       |         |         |         |
  3+50       0.1783      0.63  Q V       |         |         |         |
  3+55       0.1827      0.63  Q V       |         |         |         |
  4+ 0       0.1871      0.64  Q V       |         |         |         |
  4+ 5       0.1915      0.64  Q  V      |         |         |         |
  4+10       0.1959      0.64  Q  V      |         |         |         |
  4+15       0.2003      0.64  Q  V      |         |         |         |
  4+20       0.2048      0.64  Q  V      |         |         |         |
  4+25       0.2092      0.65  Q  V      |         |         |         |
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4+30	0.2137	0.65	Q	V				
4+35	0.2181	0.65	Q	V				
4+40	0.2226	0.65	Q	V				
4+45	0.2271	0.65	Q	V				
4+50	0.2316	0.66	Q	V				
4+55	0.2361	0.66	Q	V				
5+ 0	0.2407	0.66	Q	V				
5+ 5	0.2452	0.66	Q	V				
5+10	0.2498	0.66	Q	V				
5+15	0.2544	0.67	Q	V				
5+20	0.2590	0.67	Q	V				
5+25	0.2636	0.67	Q	V				
5+30	0.2682	0.67	Q	V				
5+35	0.2728	0.67	Q	V				
5+40	0.2775	0.68	Q	V				
5+45	0.2822	0.68	Q	V				
5+50	0.2869	0.68	Q	V				
5+55	0.2915	0.68	Q	V				
6+ 0	0.2963	0.68	Q	V				
6+ 5	0.3010	0.69	Q	V				
6+10	0.3057	0.69	Q	V				
6+15	0.3105	0.69	Q	V				
6+20	0.3153	0.69	Q	V				
6+25	0.3201	0.70	Q	V				
6+30	0.3249	0.70	Q	V				
6+35	0.3297	0.70	Q	V				
6+40	0.3345	0.70	Q	V				
6+45	0.3394	0.71	Q	V				
6+50	0.3443	0.71	Q	V				
6+55	0.3492	0.71	Q	V				
7+ 0	0.3541	0.71	Q	V				
7+ 5	0.3590	0.72	Q	V				
7+10	0.3640	0.72	Q	V				
7+15	0.3689	0.72	Q	V				
7+20	0.3739	0.72	Q	V				
7+25	0.3789	0.73	Q	V				
7+30	0.3840	0.73	Q	V				
7+35	0.3890	0.73	Q	V				
7+40	0.3941	0.74	Q	V				
7+45	0.3992	0.74	Q	V				
7+50	0.4043	0.74	Q	V				
7+55	0.4094	0.74	Q	V				
8+ 0	0.4145	0.75	Q	V				
8+ 5	0.4197	0.75	Q	V				
8+10	0.4249	0.75	Q	V				
8+15	0.4301	0.76	Q	V				
8+20	0.4353	0.76	Q	V				
8+25	0.4406	0.76	Q	V				
8+30	0.4459	0.77	Q	V				
8+35	0.4512	0.77	Q	V				
8+40	0.4565	0.77	Q	V				
8+45	0.4619	0.78	Q	V				
8+50	0.4672	0.78	Q	V				
8+55	0.4726	0.78	Q	V				
9+ 0	0.4780	0.79	Q	V				
9+ 5	0.4835	0.79	Q	V				
9+10	0.4890	0.79	Q	V				
9+15	0.4945	0.80	Q	V				
9+20	0.5000	0.80	Q	V				
9+25	0.5056	0.81	Q	V				
9+30	0.5111	0.81	Q	V				
9+35	0.5167	0.81	Q	V				
9+40	0.5224	0.82	Q	V				
9+45	0.5281	0.82	Q	V				
9+50	0.5338	0.83	Q	V				
9+55	0.5395	0.83	Q	V				
10+ 0	0.5452	0.84	Q	V				
10+ 5	0.5510	0.84	Q	V				
10+10	0.5569	0.85	Q	V				
10+15	0.5627	0.85	Q	V				
10+20	0.5686	0.85	Q	V				

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10+25       0.5745      0.86  Q        V|         |          |          |
10+30       0.5805      0.86  Q        V|         |          |          |
10+35       0.5865      0.87  Q        V|         |          |          |
10+40       0.5925      0.88  Q        V|         |          |          |
10+45       0.5986      0.88  Q        V|         |          |          |
10+50       0.6047      0.89  Q        V|         |          |          |
10+55       0.6108      0.89  Q        V|         |          |          |
11+ 0       0.6170      0.90  Q        V|         |          |          |
11+ 5       0.6232      0.90  Q        V|         |          |          |
11+10       0.6295      0.91  Q         V         |          |          |
11+15       0.6358      0.92  Q         V         |          |          |
11+20       0.6421      0.92  Q         V         |          |          |
11+25       0.6485      0.93  Q         V         |          |          |
11+30       0.6549      0.93  Q         V         |          |          |
11+35       0.6614      0.94  Q         V         |          |          |
11+40       0.6679      0.95  Q         V         |          |          |
11+45       0.6745      0.96  Q         V         |          |          |
11+50       0.6811      0.96  Q         V         |          |          |
11+55       0.6878      0.97  Q         V         |          |          |
12+ 0       0.6946      0.98  Q         |V        |          |          |
12+ 5       0.7013      0.99  Q         |V        |          |          |
12+10       0.7083      1.00  Q         |V        |          |          |
12+15       0.7153      1.03  Q         |V        |          |          |
12+20       0.7226      1.05  Q         |V        |          |          |
12+25       0.7299      1.06  Q         |V        |          |          |
12+30       0.7372      1.07  Q         |V        |          |          |
12+35       0.7447      1.08  Q         |V        |          |          |
12+40       0.7522      1.09  Q         |V        |          |          |
12+45       0.7598      1.10  Q         | V       |          |          |
12+50       0.7675      1.11  Q         | V       |          |          |
12+55       0.7752      1.13  Q         | V       |          |          |
13+ 0       0.7831      1.14  Q         | V       |          |          |
13+ 5       0.7910      1.15  Q         | V       |          |          |
13+10       0.7989      1.16  Q         | V       |          |          |
13+15       0.8070      1.17  Q         | V       |          |          |
13+20       0.8152      1.18  Q         |  V      |          |          |
13+25       0.8234      1.20  Q         |  V      |          |          |
13+30       0.8317      1.21  Q         |  V      |          |          |
13+35       0.8401      1.22  Q         |  V      |          |          |
13+40       0.8487      1.24  Q         |  V      |          |          |
13+45       0.8573      1.25  |Q        |  V      |          |          |
13+50       0.8660      1.27  |Q        |  V      |          |          |
13+55       0.8749      1.29  |Q        |  V      |          |          |
14+ 0       0.8838      1.30  |Q        |   V     |          |          |
14+ 5       0.8930      1.32  |Q        |   V     |          |          |
14+10       0.9022      1.34  |Q        |   V     |          |          |
14+15       0.9116      1.36  |Q        |   V     |          |          |
14+20       0.9211      1.38  |Q        |   V     |          |          |
14+25       0.9308      1.41  |Q        |   V     |          |          |
14+30       0.9406      1.43  |Q        |    V    |          |          |
14+35       0.9507      1.46  |Q        |    V    |          |          |
14+40       0.9609      1.48  |Q        |    V    |          |          |
14+45       0.9713      1.52  |Q        |    V    |          |          |
14+50       0.9820      1.55  |Q        |    V    |          |          |
14+55       0.9929      1.58  |Q        |    V    |          |          |
15+ 0       1.0041      1.62  |Q        |     V   |          |          |
15+ 5       1.0155      1.66  |Q        |     V   |          |          |
15+10       1.0273      1.71  |Q        |     V   |          |          |
15+15       1.0394      1.76  |Q        |     V   |          |          |
15+20       1.0519      1.81  |Q        |     V   |          |          |
15+25       1.0646      1.84  |Q        |     V   |          |          |
15+30       1.0766      1.74  |Q        |      V  |          |          |
15+35       1.0864      1.42  |Q        |      V  |          |          |
15+40       1.0955      1.33  |Q        |      V  |          |          |
15+45       1.1050      1.37  |Q        |      V  |          |          |
15+50       1.1150      1.46  |Q        |      V  |          |          |
15+55       1.1266      1.67  |Q        |      V  |          |          |
16+ 0       1.1413      2.15  |Q        |       V |          |          |
16+ 5       1.1885      6.84  |    Q    |       V |          |          |
16+10       1.3248     19.80  |         |    Q    |V         |          |
16+15       1.6053     40.72  |         |         |    V     | Q        |
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16+20      1.7395    19.49  |          |    Q     |      V  |          |
16+25      1.8159    11.09  |        Q |          |       V |          |
16+30      1.8697     7.82  |     Q    |          |         V|          |
16+35      1.9116     6.08  |   Q      |          |          V          |
16+40      1.9438     4.66  |  Q       |          |           |V         |
16+45      1.9681     3.54  | Q        |          |           |V         |
16+50      1.9854     2.51  | Q        |          |           |V         |
16+55      2.0002     2.15  |Q         |          |           |V         |
17+ 0      2.0137     1.96  |Q         |          |           | V        |
17+ 5      2.0265     1.86  |Q         |          |           | V        |
17+10      2.0388     1.78  |Q         |          |           | V        |
17+15      2.0497     1.58  |Q         |          |           | V        |
17+20      2.0597     1.45  |Q         |          |           | V        |
17+25      2.0689     1.33  |Q         |          |           | V        |
17+30      2.0778     1.30  |Q         |          |           |  V       |
17+35      2.0865     1.26  |Q         |          |           |  V       |
17+40      2.0950     1.23  Q          |          |           |  V       |
17+45      2.1033     1.20  Q          |          |           |  V       |
17+50      2.1114     1.18  Q          |          |           |  V       |
17+55      2.1193     1.15  Q          |          |           |  V       |
18+ 0      2.1271     1.13  Q          |          |           |  V       |
18+ 5      2.1348     1.11  Q          |          |           |   V      |
18+10      2.1422     1.08  Q          |          |           |   V      |
18+15      2.1494     1.04  Q          |          |           |   V      |
18+20      2.1564     1.02  Q          |          |           |   V      |
18+25      2.1633     1.00  Q          |          |           |   V      |
18+30      2.1700     0.98  Q          |          |           |   V      |
18+35      2.1766     0.96  Q          |          |           |   V      |
18+40      2.1831     0.95  Q          |          |           |   V      |
18+45      2.1896     0.93  Q          |          |           |   V      |
18+50      2.1959     0.92  Q          |          |           |    V     |
18+55      2.2021     0.91  Q          |          |           |    V     |
19+ 0      2.2083     0.89  Q          |          |           |    V     |
19+ 5      2.2144     0.88  Q          |          |           |    V     |
19+10      2.2204     0.87  Q          |          |           |    V     |
19+15      2.2263     0.86  Q          |          |           |    V     |
19+20      2.2322     0.85  Q          |          |           |    V     |
19+25      2.2380     0.84  Q          |          |           |    V     |
19+30      2.2437     0.83  Q          |          |           |    V     |
19+35      2.2494     0.82  Q          |          |           |    V     |
19+40      2.2550     0.82  Q          |          |           |    V     |
19+45      2.2606     0.81  Q          |          |           |     V    |
19+50      2.2661     0.80  Q          |          |           |     V    |
19+55      2.2716     0.79  Q          |          |           |     V    |
20+ 0      2.2770     0.79  Q          |          |           |     V    |
20+ 5      2.2823     0.78  Q          |          |           |     V    |
20+10      2.2876     0.77  Q          |          |           |     V    |
20+15      2.2929     0.76  Q          |          |           |     V    |
20+20      2.2981     0.76  Q          |          |           |     V    |
20+25      2.3033     0.75  Q          |          |           |     V    |
20+30      2.3084     0.75  Q          |          |           |     V    |
20+35      2.3135     0.74  Q          |          |           |     V    |
20+40      2.3186     0.73  Q          |          |           |     V    |
20+45      2.3236     0.73  Q          |          |           |      V   |
20+50      2.3286     0.72  Q          |          |           |      V   |
20+55      2.3335     0.72  Q          |          |           |      V   |
21+ 0      2.3384     0.71  Q          |          |           |      V   |
21+ 5      2.3433     0.71  Q          |          |           |      V   |
21+10      2.3481     0.70  Q          |          |           |      V   |
21+15      2.3529     0.70  Q          |          |           |      V   |
21+20      2.3577     0.69  Q          |          |           |      V   |
21+25      2.3624     0.69  Q          |          |           |      V   |
21+30      2.3671     0.68  Q          |          |           |      V   |
21+35      2.3718     0.68  Q          |          |           |      V   |
21+40      2.3764     0.67  Q          |          |           |      V   |
21+45      2.3810     0.67  Q          |          |           |      V   |
21+50      2.3856     0.67  Q          |          |           |       V  |
21+55      2.3902     0.66  Q          |          |           |       V  |
22+ 0      2.3947     0.66  Q          |          |           |       V  |
22+ 5      2.3992     0.65  Q          |          |           |       V  |
22+10      2.4037     0.65  Q          |          |           |       V  |
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  22+15       2.4081      0.65  Q          |          |          |       V |
  22+20       2.4126      0.64  Q          |          |          |       V |
  22+25       2.4170      0.64  Q          |          |          |       V |
  22+30       2.4213      0.64  Q          |          |          |       V |
  22+35       2.4257      0.63  Q          |          |          |       V |
  22+40       2.4300      0.63  Q          |          |          |       V |
  22+45       2.4343      0.63  Q          |          |          |       V |
  22+50       2.4386      0.62  Q          |          |          |       V |
  22+55       2.4429      0.62  Q          |          |          |       V |
  23+ 0       2.4471      0.62  Q          |          |          |        V|
  23+ 5       2.4513      0.61  Q          |          |          |        V|
  23+10       2.4555      0.61  Q          |          |          |        V|
  23+15       2.4597      0.61  Q          |          |          |        V|
  23+20       2.4638      0.60  Q          |          |          |        V|
  23+25       2.4680      0.60  Q          |          |          |        V|
  23+30       2.4721      0.60  Q          |          |          |        V|
  23+35       2.4762      0.59  Q          |          |          |        V|
  23+40       2.4803      0.59  Q          |          |          |        V|
  23+45       2.4843      0.59  Q          |          |          |        V|
  23+50       2.4884      0.59  Q          |          |          |        V|
  23+55       2.4924      0.58  Q          |          |          |        V|
  24+ 0       2.4964      0.58  Q          |          |          |        V|
  24+ 5       2.5002      0.56  Q          |          |          |        V|
  24+10       2.5034      0.46  Q          |          |          |        V|
  24+15       2.5051      0.25  Q          |          |          |        V|
  24+20       2.5062      0.15  Q          |          |          |        V|
  24+25       2.5069      0.10  Q          |          |          |        V|
  24+30       2.5073      0.06  Q          |          |          |        V|
  24+35       2.5076      0.04  Q          |          |          |        V|
  24+40       2.5077      0.02  Q          |          |          |        V|
  24+45       2.5078      0.01  Q          |          |          |        V|
  24+50       2.5079      0.01  Q          |          |          |        V|
  24+55       2.5079      0.01  Q          |          |          |        V|
  25+ 0       2.5080      0.00  Q          |          |          |        V|
  25+ 5       2.5080      0.00  Q          |          |          |        V|
  25+10       2.5080      0.00  Q          |          |          |        V|
  25+15       2.5080      0.00  Q          |          |          |        V|
-------------------------------------------------------------------------
```

Area ‘G’ – 10 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/14/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'G'
10 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            25.42            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      67.0         25.42      1.000     0.578    1.000    0.578

Area-averaged adjusted loss rate Fm (In/Hr) =  0.578

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
25.42	1.000	67.0	67.0	4.93	0.486

Area-averaged catchment yield fraction, Y = 0.486
Area-averaged low loss fraction, Yb = 0.514
User entry of time of concentration = 0.228 (hours)
++
Watershed area = 25.42(Ac.)
Catchment Lag time = 0.182 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 45.6871
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.578(In/Hr)
Average low loss rate fraction (Yb) = 0.514 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 25.42(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.474(In)
30-minute factor = 0.999 Adjusted rainfall = 0.811(In)
1-hour factor = 0.999 Adjusted rainfall = 0.999(In)
3-hour factor = 1.000 Adjusted rainfall = 1.972(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 307.42 (CFS))	
1	3.770	11.590
2	19.507	48.379
3	57.188	115.840
4	74.099	51.988
5	83.072	27.584
6	89.001	18.226
7	93.088	12.567
8	95.822	8.402
9	97.540	5.282
10	98.307	2.360
11	98.797	1.505
12	99.152	1.093
13	99.469	0.973
14	99.765	0.912
15	99.923	0.483
16	100.000	0.238

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4739	0.4739
2	0.5835	0.1095
3	0.6590	0.0755
4	0.7184	0.0594
5	0.7681	0.0497
6	0.8113	0.0432
7	0.8497	0.0384
8	0.8844	0.0347
9	0.9162	0.0318
10	0.9456	0.0294

11	0.9731	0.0274
12	0.9988	0.0257
13	1.0496	0.0508
14	1.0989	0.0493
15	1.1468	0.0480
16	1.1936	0.0468
17	1.2393	0.0457
18	1.2840	0.0447
19	1.3277	0.0437
20	1.3705	0.0429
21	1.4126	0.0420
22	1.4539	0.0413
23	1.4945	0.0406
24	1.5344	0.0399
25	1.5737	0.0393
26	1.6124	0.0387
27	1.6505	0.0381
28	1.6881	0.0376
29	1.7252	0.0371
30	1.7618	0.0366
31	1.7979	0.0361
32	1.8337	0.0357
33	1.8689	0.0353
34	1.9038	0.0349
35	1.9383	0.0345
36	1.9724	0.0341
37	2.0061	0.0337
38	2.0395	0.0334
39	2.0725	0.0330
40	2.1052	0.0327
41	2.1376	0.0324
42	2.1697	0.0321
43	2.2016	0.0318
44	2.2331	0.0315
45	2.2643	0.0313
46	2.2953	0.0310
47	2.3261	0.0307
48	2.3566	0.0305
49	2.3868	0.0302
50	2.4168	0.0300
51	2.4466	0.0298
52	2.4762	0.0296
53	2.5055	0.0293
54	2.5346	0.0291
55	2.5636	0.0289
56	2.5923	0.0287
57	2.6208	0.0285
58	2.6492	0.0283
59	2.6773	0.0282
60	2.7053	0.0280
61	2.7331	0.0278
62	2.7608	0.0276
63	2.7882	0.0275
64	2.8155	0.0273
65	2.8426	0.0271
66	2.8696	0.0270
67	2.8964	0.0268
68	2.9231	0.0267
69	2.9496	0.0265
70	2.9760	0.0264
71	3.0022	0.0262
72	3.0283	0.0261
73	3.0549	0.0266
74	3.0813	0.0265
75	3.1077	0.0263
76	3.1339	0.0262
77	3.1599	0.0261
78	3.1859	0.0259
79	3.2117	0.0258
80	3.2374	0.0257
81	3.2630	0.0256

82	3.2885	0.0255
83	3.3138	0.0254
84	3.3391	0.0252
85	3.3642	0.0251
86	3.3893	0.0250
87	3.4142	0.0249
88	3.4390	0.0248
89	3.4637	0.0247
90	3.4883	0.0246
91	3.5129	0.0245
92	3.5373	0.0244
93	3.5616	0.0243
94	3.5858	0.0242
95	3.6100	0.0241
96	3.6340	0.0240
97	3.6579	0.0239
98	3.6818	0.0239
99	3.7056	0.0238
100	3.7292	0.0237
101	3.7528	0.0236
102	3.7763	0.0235
103	3.7998	0.0234
104	3.8231	0.0233
105	3.8464	0.0233
106	3.8695	0.0232
107	3.8926	0.0231
108	3.9157	0.0230
109	3.9386	0.0229
110	3.9615	0.0229
111	3.9843	0.0228
112	4.0070	0.0227
113	4.0296	0.0226
114	4.0522	0.0226
115	4.0747	0.0225
116	4.0971	0.0224
117	4.1194	0.0224
118	4.1417	0.0223
119	4.1639	0.0222
120	4.1861	0.0221
121	4.2081	0.0221
122	4.2302	0.0220
123	4.2521	0.0219
124	4.2740	0.0219
125	4.2958	0.0218
126	4.3175	0.0218
127	4.3392	0.0217
128	4.3609	0.0216
129	4.3824	0.0216
130	4.4039	0.0215
131	4.4254	0.0214
132	4.4467	0.0214
133	4.4681	0.0213
134	4.4893	0.0213
135	4.5105	0.0212
136	4.5317	0.0211
137	4.5528	0.0211
138	4.5738	0.0210
139	4.5948	0.0210
140	4.6157	0.0209
141	4.6366	0.0209
142	4.6574	0.0208
143	4.6782	0.0208
144	4.6989	0.0207
145	4.7195	0.0207
146	4.7401	0.0206
147	4.7607	0.0206
148	4.7812	0.0205
149	4.8016	0.0205
150	4.8220	0.0204
151	4.8424	0.0204
152	4.8627	0.0203

153	4.8829	0.0203
154	4.9031	0.0202
155	4.9233	0.0202
156	4.9434	0.0201
157	4.9635	0.0201
158	4.9835	0.0200
159	5.0034	0.0200
160	5.0234	0.0199
161	5.0432	0.0199
162	5.0631	0.0198
163	5.0829	0.0198
164	5.1026	0.0197
165	5.1223	0.0197
166	5.1419	0.0197
167	5.1616	0.0196
168	5.1811	0.0196
169	5.2007	0.0195
170	5.2201	0.0195
171	5.2396	0.0194
172	5.2590	0.0194
173	5.2783	0.0194
174	5.2977	0.0193
175	5.3169	0.0193
176	5.3362	0.0192
177	5.3554	0.0192
178	5.3745	0.0192
179	5.3936	0.0191
180	5.4127	0.0191
181	5.4318	0.0190
182	5.4508	0.0190
183	5.4697	0.0190
184	5.4886	0.0189
185	5.5075	0.0189
186	5.5264	0.0189
187	5.5452	0.0188
188	5.5640	0.0188
189	5.5827	0.0187
190	5.6014	0.0187
191	5.6201	0.0187
192	5.6387	0.0186
193	5.6573	0.0186
194	5.6759	0.0186
195	5.6944	0.0185
196	5.7129	0.0185
197	5.7313	0.0185
198	5.7498	0.0184
199	5.7682	0.0184
200	5.7865	0.0184
201	5.8048	0.0183
202	5.8231	0.0183
203	5.8414	0.0183
204	5.8596	0.0182
205	5.8778	0.0182
206	5.8959	0.0182
207	5.9141	0.0181
208	5.9322	0.0181
209	5.9502	0.0181
210	5.9682	0.0180
211	5.9862	0.0180
212	6.0042	0.0180
213	6.0221	0.0179
214	6.0401	0.0179
215	6.0579	0.0179
216	6.0758	0.0178
217	6.0936	0.0178
218	6.1114	0.0178
219	6.1291	0.0178
220	6.1468	0.0177
221	6.1645	0.0177
222	6.1822	0.0177
223	6.1998	0.0176

224	6.2174	0.0176
225	6.2350	0.0176
226	6.2526	0.0175
227	6.2701	0.0175
228	6.2876	0.0175
229	6.3051	0.0175
230	6.3225	0.0174
231	6.3399	0.0174
232	6.3573	0.0174
233	6.3746	0.0174
234	6.3920	0.0173
235	6.4093	0.0173
236	6.4265	0.0173
237	6.4438	0.0172
238	6.4610	0.0172
239	6.4782	0.0172
240	6.4954	0.0172
241	6.5125	0.0171
242	6.5296	0.0171
243	6.5467	0.0171
244	6.5638	0.0171
245	6.5808	0.0170
246	6.5978	0.0170
247	6.6148	0.0170
248	6.6318	0.0170
249	6.6487	0.0169
250	6.6656	0.0169
251	6.6825	0.0169
252	6.6994	0.0169
253	6.7162	0.0168
254	6.7330	0.0168
255	6.7498	0.0168
256	6.7666	0.0168
257	6.7833	0.0167
258	6.8000	0.0167
259	6.8167	0.0167
260	6.8334	0.0167
261	6.8500	0.0166
262	6.8667	0.0166
263	6.8833	0.0166
264	6.8998	0.0166
265	6.9164	0.0166
266	6.9329	0.0165
267	6.9494	0.0165
268	6.9659	0.0165
269	6.9824	0.0165
270	6.9988	0.0164
271	7.0152	0.0164
272	7.0316	0.0164
273	7.0480	0.0164
274	7.0643	0.0164
275	7.0807	0.0163
276	7.0970	0.0163
277	7.1133	0.0163
278	7.1295	0.0163
279	7.1458	0.0162
280	7.1620	0.0162
281	7.1782	0.0162
282	7.1944	0.0162
283	7.2105	0.0162
284	7.2267	0.0161
285	7.2428	0.0161
286	7.2589	0.0161
287	7.2750	0.0161
288	7.2910	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0083	0.0078

2	0.0161	0.0083	0.0078
3	0.0161	0.0083	0.0078
4	0.0161	0.0083	0.0078
5	0.0162	0.0083	0.0079
6	0.0162	0.0083	0.0079
7	0.0162	0.0084	0.0079
8	0.0163	0.0084	0.0079
9	0.0163	0.0084	0.0079
10	0.0163	0.0084	0.0079
11	0.0164	0.0084	0.0080
12	0.0164	0.0084	0.0080
13	0.0164	0.0085	0.0080
14	0.0165	0.0085	0.0080
15	0.0165	0.0085	0.0080
16	0.0165	0.0085	0.0080
17	0.0166	0.0085	0.0080
18	0.0166	0.0085	0.0081
19	0.0166	0.0086	0.0081
20	0.0167	0.0086	0.0081
21	0.0167	0.0086	0.0081
22	0.0167	0.0086	0.0081
23	0.0168	0.0086	0.0082
24	0.0168	0.0086	0.0082
25	0.0169	0.0087	0.0082
26	0.0169	0.0087	0.0082
27	0.0169	0.0087	0.0082
28	0.0170	0.0087	0.0082
29	0.0170	0.0088	0.0083
30	0.0170	0.0088	0.0083
31	0.0171	0.0088	0.0083
32	0.0171	0.0088	0.0083
33	0.0172	0.0088	0.0083
34	0.0172	0.0088	0.0083
35	0.0172	0.0089	0.0084
36	0.0173	0.0089	0.0084
37	0.0173	0.0089	0.0084
38	0.0174	0.0089	0.0084
39	0.0174	0.0090	0.0085
40	0.0174	0.0090	0.0085
41	0.0175	0.0090	0.0085
42	0.0175	0.0090	0.0085
43	0.0176	0.0090	0.0085
44	0.0176	0.0091	0.0086
45	0.0177	0.0091	0.0086
46	0.0177	0.0091	0.0086
47	0.0178	0.0091	0.0086
48	0.0178	0.0091	0.0086
49	0.0178	0.0092	0.0087
50	0.0179	0.0092	0.0087
51	0.0179	0.0092	0.0087
52	0.0180	0.0092	0.0087
53	0.0180	0.0093	0.0088
54	0.0181	0.0093	0.0088
55	0.0181	0.0093	0.0088
56	0.0182	0.0093	0.0088
57	0.0182	0.0094	0.0088
58	0.0183	0.0094	0.0089
59	0.0183	0.0094	0.0089
60	0.0184	0.0094	0.0089
61	0.0184	0.0095	0.0089
62	0.0185	0.0095	0.0090
63	0.0185	0.0095	0.0090
64	0.0186	0.0095	0.0090
65	0.0186	0.0096	0.0090
66	0.0187	0.0096	0.0091
67	0.0187	0.0096	0.0091
68	0.0188	0.0097	0.0091
69	0.0189	0.0097	0.0092
70	0.0189	0.0097	0.0092
71	0.0190	0.0098	0.0092
72	0.0190	0.0098	0.0092

73	0.0191	0.0098	0.0093
74	0.0191	0.0098	0.0093
75	0.0192	0.0099	0.0093
76	0.0192	0.0099	0.0093
77	0.0193	0.0099	0.0094
78	0.0194	0.0100	0.0094
79	0.0194	0.0100	0.0094
80	0.0195	0.0100	0.0095
81	0.0196	0.0101	0.0095
82	0.0196	0.0101	0.0095
83	0.0197	0.0101	0.0096
84	0.0197	0.0102	0.0096
85	0.0198	0.0102	0.0096
86	0.0199	0.0102	0.0097
87	0.0200	0.0103	0.0097
88	0.0200	0.0103	0.0097
89	0.0201	0.0103	0.0098
90	0.0202	0.0104	0.0098
91	0.0203	0.0104	0.0098
92	0.0203	0.0104	0.0099
93	0.0204	0.0105	0.0099
94	0.0205	0.0105	0.0099
95	0.0206	0.0106	0.0100
96	0.0206	0.0106	0.0100
97	0.0207	0.0107	0.0101
98	0.0208	0.0107	0.0101
99	0.0209	0.0107	0.0101
100	0.0209	0.0108	0.0102
101	0.0210	0.0108	0.0102
102	0.0211	0.0108	0.0102
103	0.0212	0.0109	0.0103
104	0.0213	0.0109	0.0103
105	0.0214	0.0110	0.0104
106	0.0214	0.0110	0.0104
107	0.0216	0.0111	0.0105
108	0.0216	0.0111	0.0105
109	0.0218	0.0112	0.0106
110	0.0218	0.0112	0.0106
111	0.0219	0.0113	0.0107
112	0.0220	0.0113	0.0107
113	0.0221	0.0114	0.0108
114	0.0222	0.0114	0.0108
115	0.0224	0.0115	0.0109
116	0.0224	0.0115	0.0109
117	0.0226	0.0116	0.0110
118	0.0226	0.0116	0.0110
119	0.0228	0.0117	0.0111
120	0.0229	0.0118	0.0111
121	0.0230	0.0118	0.0112
122	0.0231	0.0119	0.0112
123	0.0233	0.0120	0.0113
124	0.0233	0.0120	0.0113
125	0.0235	0.0121	0.0114
126	0.0236	0.0121	0.0115
127	0.0238	0.0122	0.0115
128	0.0239	0.0123	0.0116
129	0.0240	0.0124	0.0117
130	0.0241	0.0124	0.0117
131	0.0243	0.0125	0.0118
132	0.0244	0.0126	0.0119
133	0.0246	0.0127	0.0120
134	0.0247	0.0127	0.0120
135	0.0249	0.0128	0.0121
136	0.0250	0.0129	0.0122
137	0.0252	0.0130	0.0123
138	0.0254	0.0130	0.0123
139	0.0256	0.0132	0.0124
140	0.0257	0.0132	0.0125
141	0.0259	0.0133	0.0126
142	0.0261	0.0134	0.0127
143	0.0263	0.0135	0.0128

144	0.0265	0.0136	0.0128
145	0.0261	0.0134	0.0127
146	0.0262	0.0135	0.0127
147	0.0265	0.0136	0.0129
148	0.0267	0.0137	0.0129
149	0.0270	0.0139	0.0131
150	0.0271	0.0140	0.0132
151	0.0275	0.0141	0.0133
152	0.0276	0.0142	0.0134
153	0.0280	0.0144	0.0136
154	0.0282	0.0145	0.0137
155	0.0285	0.0147	0.0139
156	0.0287	0.0148	0.0140
157	0.0291	0.0150	0.0141
158	0.0293	0.0151	0.0143
159	0.0298	0.0153	0.0145
160	0.0300	0.0154	0.0146
161	0.0305	0.0157	0.0148
162	0.0307	0.0158	0.0149
163	0.0313	0.0161	0.0152
164	0.0315	0.0162	0.0153
165	0.0321	0.0165	0.0156
166	0.0324	0.0167	0.0157
167	0.0330	0.0170	0.0160
168	0.0334	0.0172	0.0162
169	0.0341	0.0175	0.0166
170	0.0345	0.0177	0.0167
171	0.0353	0.0181	0.0171
172	0.0357	0.0184	0.0173
173	0.0366	0.0188	0.0178
174	0.0371	0.0191	0.0180
175	0.0381	0.0196	0.0185
176	0.0387	0.0199	0.0188
177	0.0399	0.0205	0.0194
178	0.0406	0.0209	0.0197
179	0.0420	0.0216	0.0204
180	0.0429	0.0220	0.0208
181	0.0447	0.0230	0.0217
182	0.0457	0.0235	0.0222
183	0.0480	0.0247	0.0233
184	0.0493	0.0254	0.0239
185	0.0257	0.0132	0.0125
186	0.0274	0.0141	0.0133
187	0.0318	0.0164	0.0154
188	0.0347	0.0179	0.0169
189	0.0432	0.0222	0.0210
190	0.0497	0.0256	0.0242
191	0.0755	0.0388	0.0367
192	0.1095	0.0482	0.0614
193	0.4739	0.0482	0.4258
194	0.0594	0.0306	0.0288
195	0.0384	0.0198	0.0186
196	0.0294	0.0151	0.0143
197	0.0508	0.0261	0.0247
198	0.0468	0.0241	0.0227
199	0.0437	0.0225	0.0212
200	0.0413	0.0212	0.0201
201	0.0393	0.0202	0.0191
202	0.0376	0.0193	0.0183
203	0.0361	0.0186	0.0176
204	0.0349	0.0179	0.0169
205	0.0337	0.0173	0.0164
206	0.0327	0.0168	0.0159
207	0.0318	0.0164	0.0154
208	0.0310	0.0159	0.0151
209	0.0302	0.0156	0.0147
210	0.0296	0.0152	0.0144
211	0.0289	0.0149	0.0140
212	0.0283	0.0146	0.0138
213	0.0278	0.0143	0.0135
214	0.0273	0.0140	0.0133

215	0.0268	0.0138	0.0130
216	0.0264	0.0136	0.0128
217	0.0266	0.0137	0.0129
218	0.0262	0.0135	0.0127
219	0.0258	0.0133	0.0125
220	0.0255	0.0131	0.0124
221	0.0251	0.0129	0.0122
222	0.0248	0.0128	0.0121
223	0.0245	0.0126	0.0119
224	0.0242	0.0125	0.0118
225	0.0239	0.0123	0.0116
226	0.0237	0.0122	0.0115
227	0.0234	0.0120	0.0114
228	0.0232	0.0119	0.0113
229	0.0229	0.0118	0.0111
230	0.0227	0.0117	0.0110
231	0.0225	0.0116	0.0109
232	0.0223	0.0115	0.0108
233	0.0221	0.0114	0.0107
234	0.0219	0.0113	0.0106
235	0.0217	0.0112	0.0105
236	0.0215	0.0111	0.0104
237	0.0213	0.0110	0.0104
238	0.0211	0.0109	0.0103
239	0.0210	0.0108	0.0102
240	0.0208	0.0107	0.0101
241	0.0207	0.0106	0.0100
242	0.0205	0.0105	0.0100
243	0.0204	0.0105	0.0099
244	0.0202	0.0104	0.0098
245	0.0201	0.0103	0.0097
246	0.0199	0.0102	0.0097
247	0.0198	0.0102	0.0096
248	0.0197	0.0101	0.0095
249	0.0195	0.0100	0.0095
250	0.0194	0.0100	0.0094
251	0.0193	0.0099	0.0094
252	0.0192	0.0099	0.0093
253	0.0190	0.0098	0.0092
254	0.0189	0.0097	0.0092
255	0.0188	0.0097	0.0091
256	0.0187	0.0096	0.0091
257	0.0186	0.0096	0.0090
258	0.0185	0.0095	0.0090
259	0.0184	0.0095	0.0089
260	0.0183	0.0094	0.0089
261	0.0182	0.0094	0.0088
262	0.0181	0.0093	0.0088
263	0.0180	0.0093	0.0087
264	0.0179	0.0092	0.0087
265	0.0178	0.0092	0.0087
266	0.0177	0.0091	0.0086
267	0.0176	0.0091	0.0086
268	0.0175	0.0090	0.0085
269	0.0175	0.0090	0.0085
270	0.0174	0.0089	0.0084
271	0.0173	0.0089	0.0084
272	0.0172	0.0089	0.0084
273	0.0171	0.0088	0.0083
274	0.0171	0.0088	0.0083
275	0.0170	0.0087	0.0082
276	0.0169	0.0087	0.0082
277	0.0168	0.0087	0.0082
278	0.0168	0.0086	0.0081
279	0.0167	0.0086	0.0081
280	0.0166	0.0086	0.0081
281	0.0166	0.0085	0.0080
282	0.0165	0.0085	0.0080
283	0.0164	0.0084	0.0080
284	0.0164	0.0084	0.0079
285	0.0163	0.0084	0.0079

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      286              0.0162           0.0083              0.0079
      287              0.0162           0.0083              0.0078
      288              0.0161           0.0083              0.0078
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.55(In)
      Total effective rainfall =      3.74(In)
      Peak flow rate in flood hydrograph =     56.19(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       15.0      30.0      45.0      60.0
----------------------------------------------------------------------------
  0+ 5       0.0006      0.09  Q         |         |         |         |
  0+10       0.0038      0.47  Q         |         |         |         |
  0+15       0.0133      1.37  Q         |         |         |         |
  0+20       0.0255      1.78  VQ        |         |         |         |
  0+25       0.0393      2.00  VQ        |         |         |         |
  0+30       0.0541      2.14  VQ        |         |         |         |
  0+35       0.0695      2.25  VQ        |         |         |         |
  0+40       0.0855      2.32  VQ        |         |         |         |
  0+45       0.1017      2.36  VQ        |         |         |         |
  0+50       0.1182      2.38  VQ        |         |         |         |
  0+55       0.1347      2.40  VQ        |         |         |         |
  1+ 0       0.1513      2.41  VQ        |         |         |         |
  1+ 5       0.1680      2.43  VQ        |         |         |         |
  1+10       0.1848      2.44  VQ        |         |         |         |
  1+15       0.2017      2.45  |Q        |         |         |         |
  1+20       0.2186      2.45  |Q        |         |         |         |
  1+25       0.2355      2.46  |Q        |         |         |         |
  1+30       0.2525      2.46  |Q        |         |         |         |
  1+35       0.2695      2.47  |Q        |         |         |         |
  1+40       0.2865      2.47  |Q        |         |         |         |
  1+45       0.3036      2.48  |Q        |         |         |         |
  1+50       0.3207      2.48  |Q        |         |         |         |
  1+55       0.3379      2.49  |Q        |         |         |         |
  2+ 0       0.3551      2.50  |Q        |         |         |         |
  2+ 5       0.3723      2.50  |Q        |         |         |         |
  2+10       0.3895      2.51  |Q        |         |         |         |
  2+15       0.4068      2.51  |QV       |         |         |         |
  2+20       0.4242      2.52  |QV       |         |         |         |
  2+25       0.4415      2.52  |QV       |         |         |         |
  2+30       0.4590      2.53  |QV       |         |         |         |
  2+35       0.4764      2.53  |QV       |         |         |         |
  2+40       0.4939      2.54  |QV       |         |         |         |
  2+45       0.5114      2.55  |QV       |         |         |         |
  2+50       0.5290      2.55  |QV       |         |         |         |
  2+55       0.5466      2.56  |QV       |         |         |         |
  3+ 0       0.5642      2.56  |QV       |         |         |         |
  3+ 5       0.5819      2.57  |QV       |         |         |         |
  3+10       0.5997      2.57  |Q V      |         |         |         |
  3+15       0.6174      2.58  |Q V      |         |         |         |
  3+20       0.6352      2.59  |Q V      |         |         |         |
  3+25       0.6531      2.59  |Q V      |         |         |         |
  3+30       0.6710      2.60  |Q V      |         |         |         |
  3+35       0.6889      2.60  |Q V      |         |         |         |
  3+40       0.7069      2.61  |Q V      |         |         |         |
  3+45       0.7249      2.62  |Q V      |         |         |         |
  3+50       0.7430      2.62  |Q V      |         |         |         |
  3+55       0.7611      2.63  |Q V      |         |         |         |
  4+ 0       0.7793      2.64  |Q V      |         |         |         |
  4+ 5       0.7975      2.64  |Q  V     |         |         |         |
  4+10       0.8157      2.65  |Q  V     |         |         |         |
  4+15       0.8340      2.66  |Q  V     |         |         |         |
  4+20       0.8524      2.66  |Q  V     |         |         |         |
  4+25       0.8708      2.67  |Q  V     |         |         |         |
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 4+30      0.8892     2.68  |Q  V     |         |         |         |
 4+35      0.9077     2.68  |Q  V     |         |         |         |
 4+40      0.9262     2.69  |Q  V     |         |         |         |
 4+45      0.9448     2.70  |Q  V     |         |         |         |
 4+50      0.9634     2.71  |Q  V     |         |         |         |
 4+55      0.9821     2.71  |Q  V     |         |         |         |
 5+ 0      1.0009     2.72  |Q   V    |         |         |         |
 5+ 5      1.0196     2.73  |Q   V    |         |         |         |
 5+10      1.0385     2.73  |Q   V    |         |         |         |
 5+15      1.0574     2.74  |Q   V    |         |         |         |
 5+20      1.0763     2.75  |Q   V    |         |         |         |
 5+25      1.0953     2.76  |Q   V    |         |         |         |
 5+30      1.1143     2.77  |Q   V    |         |         |         |
 5+35      1.1334     2.77  |Q   V    |         |         |         |
 5+40      1.1526     2.78  |Q   V    |         |         |         |
 5+45      1.1718     2.79  |Q   V    |         |         |         |
 5+50      1.1911     2.80  |Q    V   |         |         |         |
 5+55      1.2104     2.81  |Q    V   |         |         |         |
 6+ 0      1.2298     2.81  |Q    V   |         |         |         |
 6+ 5      1.2492     2.82  |Q    V   |         |         |         |
 6+10      1.2687     2.83  |Q    V   |         |         |         |
 6+15      1.2882     2.84  |Q    V   |         |         |         |
 6+20      1.3079     2.85  |Q    V   |         |         |         |
 6+25      1.3275     2.86  |Q    V   |         |         |         |
 6+30      1.3473     2.87  |Q    V   |         |         |         |
 6+35      1.3671     2.87  |Q    V   |         |         |         |
 6+40      1.3869     2.88  |Q    V   |         |         |         |
 6+45      1.4068     2.89  |Q     V  |         |         |         |
 6+50      1.4268     2.90  |Q     V  |         |         |         |
 6+55      1.4469     2.91  |Q     V  |         |         |         |
 7+ 0      1.4670     2.92  |Q     V  |         |         |         |
 7+ 5      1.4872     2.93  |Q     V  |         |         |         |
 7+10      1.5074     2.94  |Q     V  |         |         |         |
 7+15      1.5277     2.95  |Q     V  |         |         |         |
 7+20      1.5481     2.96  |Q     V  |         |         |         |
 7+25      1.5686     2.97  |Q     V  |         |         |         |
 7+30      1.5891     2.98  |Q      V |         |         |         |
 7+35      1.6097     2.99  |Q      V |         |         |         |
 7+40      1.6304     3.00  | Q     V |         |         |         |
 7+45      1.6511     3.01  | Q     V |         |         |         |
 7+50      1.6719     3.02  | Q     V |         |         |         |
 7+55      1.6928     3.03  | Q     V |         |         |         |
 8+ 0      1.7138     3.04  | Q     V |         |         |         |
 8+ 5      1.7348     3.06  | Q     V |         |         |         |
 8+10      1.7560     3.07  | Q     V |         |         |         |
 8+15      1.7772     3.08  | Q     V |         |         |         |
 8+20      1.7985     3.09  | Q      V|         |         |         |
 8+25      1.8198     3.10  | Q      V|         |         |         |
 8+30      1.8413     3.11  | Q      V|         |         |         |
 8+35      1.8628     3.13  | Q      V|         |         |         |
 8+40      1.8844     3.14  | Q      V|         |         |         |
 8+45      1.9062     3.15  | Q      V|         |         |         |
 8+50      1.9280     3.16  | Q      V|         |         |         |
 8+55      1.9498     3.18  | Q      V|         |         |         |
 9+ 0      1.9718     3.19  | Q      V|         |         |         |
 9+ 5      1.9939     3.21  | Q       V         |         |         |
 9+10      2.0161     3.22  | Q       V         |         |         |
 9+15      2.0383     3.23  | Q       V         |         |         |
 9+20      2.0607     3.25  | Q       V         |         |         |
 9+25      2.0831     3.26  | Q       V         |         |         |
 9+30      2.1057     3.27  | Q       V         |         |         |
 9+35      2.1284     3.29  | Q       V         |         |         |
 9+40      2.1511     3.30  | Q       V         |         |         |
 9+45      2.1740     3.32  | Q       V         |         |         |
 9+50      2.1970     3.34  | Q       |V        |         |         |
 9+55      2.2200     3.35  | Q       |V        |         |         |
10+ 0      2.2432     3.37  | Q       |V        |         |         |
10+ 5      2.2666     3.38  | Q       |V        |         |         |
10+10      2.2900     3.40  | Q       |V        |         |         |
10+15      2.3135     3.42  | Q       |V        |         |         |
10+20      2.3372     3.44  | Q       |V        |         |         |
```

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10+25       2.3610      3.45  | Q       |V        |         |         |
10+30       2.3849      3.47  | Q       | V       |         |         |
10+35       2.4089      3.49  | Q       | V       |         |         |
10+40       2.4331      3.51  | Q       | V       |         |         |
10+45       2.4574      3.53  | Q       | V       |         |         |
10+50       2.4818      3.55  | Q       | V       |         |         |
10+55       2.5064      3.57  | Q       | V       |         |         |
11+ 0       2.5311      3.59  | Q       | V       |         |         |
11+ 5       2.5559      3.61  | Q       | V       |         |         |
11+10       2.5809      3.63  | Q       |  V      |         |         |
11+15       2.6061      3.65  | Q       |  V      |         |         |
11+20       2.6314      3.67  | Q       |  V      |         |         |
11+25       2.6569      3.70  | Q       |  V      |         |         |
11+30       2.6825      3.72  | Q       |  V      |         |         |
11+35       2.7083      3.74  | Q       |  V      |         |         |
11+40       2.7342      3.77  | Q       |  V      |         |         |
11+45       2.7603      3.79  | Q       |  V      |         |         |
11+50       2.7867      3.82  | Q       |   V     |         |         |
11+55       2.8131      3.85  | Q       |   V     |         |         |
12+ 0       2.8398      3.87  | Q       |   V     |         |         |
12+ 5       2.8667      3.90  | Q       |   V     |         |         |
12+10       2.8936      3.91  | Q       |   V     |         |         |
12+15       2.9205      3.91  | Q       |   V     |         |         |
12+20       2.9475      3.92  | Q       |   V     |         |         |
12+25       2.9746      3.94  | Q       |    V    |         |         |
12+30       3.0019      3.97  | Q       |    V    |         |         |
12+35       3.0295      4.00  | Q       |    V    |         |         |
12+40       3.0572      4.03  | Q       |    V    |         |         |
12+45       3.0852      4.07  | Q       |    V    |         |         |
12+50       3.1135      4.10  | Q       |    V    |         |         |
12+55       3.1420      4.14  | Q       |    V    |         |         |
13+ 0       3.1707      4.18  | Q       |    V    |         |         |
13+ 5       3.1998      4.22  | Q       |     V   |         |         |
13+10       3.2291      4.26  | Q       |     V   |         |         |
13+15       3.2588      4.31  | Q       |     V   |         |         |
13+20       3.2887      4.35  | Q       |     V   |         |         |
13+25       3.3190      4.40  | Q       |     V   |         |         |
13+30       3.3496      4.45  | Q       |     V   |         |         |
13+35       3.3806      4.50  | Q       |      V  |         |         |
13+40       3.4120      4.55  |  Q      |      V  |         |         |
13+45       3.4437      4.61  |  Q      |      V  |         |         |
13+50       3.4758      4.67  |  Q      |      V  |         |         |
13+55       3.5084      4.73  |  Q      |      V  |         |         |
14+ 0       3.5414      4.79  |  Q      |      V  |         |         |
14+ 5       3.5749      4.86  |  Q      |       V |         |         |
14+10       3.6089      4.93  |  Q      |       V |         |         |
14+15       3.6434      5.02  |  Q      |       V |         |         |
14+20       3.6785      5.09  |  Q      |       V |         |         |
14+25       3.7142      5.18  |  Q      |       V |         |         |
14+30       3.7505      5.27  |  Q      |       V |         |         |
14+35       3.7875      5.37  |  Q      |        V|         |         |
14+40       3.8251      5.47  |  Q      |        V|         |         |
14+45       3.8636      5.58  |  Q      |        V|         |         |
14+50       3.9028      5.70  |  Q      |        V|         |         |
14+55       3.9430      5.83  |  Q      |        V|         |         |
15+ 0       3.9841      5.97  |  Q      |         V         |         |
15+ 5       4.0263      6.13  |   Q     |         V         |         |
15+10       4.0697      6.29  |   Q     |         V         |         |
15+15       4.1144      6.49  |   Q     |         V         |         |
15+20       4.1605      6.69  |   Q     |         V         |         |
15+25       4.2073      6.79  |   Q     |         |V        |         |
15+30       4.2515      6.43  |   Q     |         |V        |         |
15+35       4.2878      5.26  |  Q      |         |V        |         |
15+40       4.3218      4.94  |  Q      |         |V        |         |
15+45       4.3567      5.07  |  Q      |         |V        |         |
15+50       4.3940      5.42  |  Q      |         | V       |         |
15+55       4.4367      6.21  |   Q     |         | V       |         |
16+ 0       4.4896      7.68  |    Q    |         | V       |         |
16+ 5       4.5918     14.83  |       Q |         |  V      |         |
16+10       4.8091     31.55  |         |         |Q  V     |         |
16+15       5.1961     56.19  |         |         |     V   |     Q   |
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16+20       5.4000     29.60  |          |          Q|       V  |          |
16+25       5.5267     18.40  |          |  Q        |       V  |          |
16+30       5.6230     13.98  |          Q|           |        V |          |
16+35       5.7069     12.19  |         Q |           |        V |          |
16+40       5.7782     10.36  |      Q    |           |         V|          |
16+45       5.8386      8.77  |     Q     |           |         V|          |
16+50       5.8890      7.32  |    Q      |           |         V|          |
16+55       5.9353      6.72  |    Q      |           |         V|          |
17+ 0       5.9788      6.32  |    Q      |           |          V          |
17+ 5       6.0206      6.06  |    Q      |           |          V          |
17+10       6.0605      5.81  |   Q       |           |          V          |
17+15       6.0980      5.43  |   Q       |           |          V          |
17+20       6.1335      5.15  |   Q       |           |          V          |
17+25       6.1672      4.91  |   Q       |           |          |V         |
17+30       6.2001      4.77  |   Q       |           |          |V         |
17+35       6.2321      4.65  |   Q       |           |          |V         |
17+40       6.2633      4.53  |   Q       |           |          |V         |
17+45       6.2938      4.43  |  Q        |           |          |V         |
17+50       6.3237      4.33  |  Q        |           |          |V         |
17+55       6.3529      4.24  |  Q        |           |          | V        |
18+ 0       6.3815      4.16  |  Q        |           |          | V        |
18+ 5       6.4097      4.09  |  Q        |           |          | V        |
18+10       6.4374      4.03  |  Q        |           |          | V        |
18+15       6.4649      4.00  |  Q        |           |          | V        |
18+20       6.4921      3.95  |  Q        |           |          | V        |
18+25       6.5190      3.90  |  Q        |           |          | V        |
18+30       6.5455      3.85  |  Q        |           |          |  V       |
18+35       6.5716      3.80  |  Q        |           |          |  V       |
18+40       6.5975      3.75  |  Q        |           |          |  V       |
18+45       6.6230      3.70  |  Q        |           |          |  V       |
18+50       6.6482      3.66  |  Q        |           |          |  V       |
18+55       6.6731      3.62  |  Q        |           |          |  V       |
19+ 0       6.6977      3.58  |  Q        |           |          |  V       |
19+ 5       6.7221      3.54  |  Q        |           |          |  V       |
19+10       6.7462      3.50  |  Q        |           |          |   V      |
19+15       6.7700      3.46  |  Q        |           |          |   V      |
19+20       6.7936      3.43  |  Q        |           |          |   V      |
19+25       6.8169      3.39  |  Q        |           |          |   V      |
19+30       6.8401      3.36  |  Q        |           |          |   V      |
19+35       6.8630      3.33  |  Q        |           |          |   V      |
19+40       6.8857      3.30  |  Q        |           |          |   V      |
19+45       6.9082      3.27  |  Q        |           |          |   V      |
19+50       6.9305      3.24  |  Q        |           |          |   V      |
19+55       6.9526      3.21  |  Q        |           |          |    V     |
20+ 0       6.9745      3.18  |  Q        |           |          |    V     |
20+ 5       6.9962      3.16  |  Q        |           |          |    V     |
20+10       7.0178      3.13  |  Q        |           |          |    V     |
20+15       7.0392      3.11  |  Q        |           |          |    V     |
20+20       7.0604      3.08  |  Q        |           |          |    V     |
20+25       7.0815      3.06  |  Q        |           |          |    V     |
20+30       7.1024      3.04  |  Q        |           |          |    V     |
20+35       7.1232      3.02  |  Q        |           |          |    V     |
20+40       7.1438      2.99  |Q          |           |          |     V    |
20+45       7.1643      2.97  |Q          |           |          |     V    |
20+50       7.1846      2.95  |Q          |           |          |     V    |
20+55       7.2048      2.93  |Q          |           |          |     V    |
21+ 0       7.2249      2.91  |Q          |           |          |     V    |
21+ 5       7.2449      2.90  |Q          |           |          |     V    |
21+10       7.2647      2.88  |Q          |           |          |     V    |
21+15       7.2844      2.86  |Q          |           |          |     V    |
21+20       7.3039      2.84  |Q          |           |          |     V    |
21+25       7.3234      2.82  |Q          |           |          |     V    |
21+30       7.3427      2.81  |Q          |           |          |      V   |
21+35       7.3620      2.79  |Q          |           |          |      V   |
21+40       7.3811      2.78  |Q          |           |          |      V   |
21+45       7.4001      2.76  |Q          |           |          |      V   |
21+50       7.4190      2.74  |Q          |           |          |      V   |
21+55       7.4378      2.73  |Q          |           |          |      V   |
22+ 0       7.4565      2.71  |Q          |           |          |      V   |
22+ 5       7.4751      2.70  |Q          |           |          |      V   |
22+10       7.4936      2.69  |Q          |           |          |      V   |
```

```
  22+15       7.5120      2.67  |Q        |         |         |      V  |
  22+20       7.5303      2.66  |Q        |         |         |      V  |
  22+25       7.5485      2.65  |Q        |         |         |       V |
  22+30       7.5666      2.63  |Q        |         |         |       V |
  22+35       7.5847      2.62  |Q        |         |         |       V |
  22+40       7.6026      2.61  |Q        |         |         |       V |
  22+45       7.6205      2.59  |Q        |         |         |       V |
  22+50       7.6383      2.58  |Q        |         |         |       V |
  22+55       7.6560      2.57  |Q        |         |         |       V |
  23+ 0       7.6736      2.56  |Q        |         |         |       V |
  23+ 5       7.6911      2.55  |Q        |         |         |       V |
  23+10       7.7086      2.54  |Q        |         |         |       V |
  23+15       7.7260      2.52  |Q        |         |         |       V |
  23+20       7.7433      2.51  |Q        |         |         |        V|
  23+25       7.7605      2.50  |Q        |         |         |        V|
  23+30       7.7777      2.49  |Q        |         |         |        V|
  23+35       7.7948      2.48  |Q        |         |         |        V|
  23+40       7.8118      2.47  |Q        |         |         |        V|
  23+45       7.8287      2.46  |Q        |         |         |        V|
  23+50       7.8456      2.45  |Q        |         |         |        V|
  23+55       7.8624      2.44  |Q        |         |         |        V|
  24+ 0       7.8792      2.43  |Q        |         |         |        V|
  24+ 5       7.8952      2.33  |Q        |         |         |        V|
  24+10       7.9086      1.95  |Q        |         |         |        V|
  24+15       7.9158      1.04  Q         |         |         |        V|
  24+20       7.9201      0.63  Q         |         |         |        V|
  24+25       7.9229      0.41  Q         |         |         |        V|
  24+30       7.9247      0.27  Q         |         |         |        V|
  24+35       7.9259      0.17  Q         |         |         |        V|
  24+40       7.9266      0.10  Q         |         |         |        V|
  24+45       7.9270      0.06  Q         |         |         |        V|
  24+50       7.9273      0.04  Q         |         |         |        V|
  24+55       7.9275      0.03  Q         |         |         |        V|
  25+ 0       7.9276      0.02  Q         |         |         |        V|
  25+ 5       7.9277      0.01  Q         |         |         |        V|
  25+10       7.9277      0.01  Q         |         |         |        V|
  25+15       7.9277      0.00  Q         |         |         |         V
--------------------------------------------------------------------------
```

Area ‘G’ – 25 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/14/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'G'
25 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            25.42            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      67.0         25.42      1.000     0.578    1.000    0.578

Area-averaged adjusted loss rate Fm (In/Hr) =  0.578

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
25.42	1.000	67.0	67.0	4.93	0.557

Area-averaged catchment yield fraction, Y = 0.557
Area-averaged low loss fraction, Yb = 0.443
User entry of time of concentration = 0.228 (hours)
++
Watershed area = 25.42(Ac.)
Catchment Lag time = 0.182 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 45.6871
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.578(In/Hr)
Average low loss rate fraction (Yb) = 0.443 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 25.42(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.568(In)
30-minute factor = 0.999 Adjusted rainfall = 0.973(In)
1-hour factor = 0.999 Adjusted rainfall = 1.198(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 307.42 (CFS))	
1	3.770	11.590
2	19.507	48.379
3	57.188	115.840
4	74.099	51.988
5	83.072	27.584
6	89.001	18.226
7	93.088	12.567
8	95.822	8.402
9	97.540	5.282
10	98.307	2.360
11	98.797	1.505
12	99.152	1.093
13	99.469	0.973
14	99.765	0.912
15	99.923	0.483
16	100.000	0.238

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5682	0.5682
2	0.6996	0.1313
3	0.7901	0.0905
4	0.8613	0.0712
5	0.9209	0.0596
6	0.9727	0.0518
7	1.0187	0.0460
8	1.0604	0.0416
9	1.0985	0.0381
10	1.1338	0.0353

11	1.1667	0.0329
12	1.1975	0.0309
13	1.2581	0.0606
14	1.3170	0.0588
15	1.3742	0.0572
16	1.4300	0.0558
17	1.4845	0.0545
18	1.5378	0.0533
19	1.5899	0.0521
20	1.6410	0.0511
21	1.6912	0.0501
22	1.7404	0.0492
23	1.7888	0.0484
24	1.8363	0.0476
25	1.8832	0.0468
26	1.9293	0.0461
27	1.9747	0.0454
28	2.0195	0.0448
29	2.0637	0.0442
30	2.1073	0.0436
31	2.1503	0.0430
32	2.1928	0.0425
33	2.2349	0.0420
34	2.2764	0.0415
35	2.3175	0.0411
36	2.3581	0.0406
37	2.3982	0.0401
38	2.4379	0.0397
39	2.4772	0.0393
40	2.5162	0.0389
41	2.5547	0.0386
42	2.5929	0.0382
43	2.6308	0.0379
44	2.6683	0.0375
45	2.7055	0.0372
46	2.7424	0.0369
47	2.7789	0.0366
48	2.8152	0.0363
49	2.8512	0.0360
50	2.8869	0.0357
51	2.9223	0.0354
52	2.9575	0.0352
53	2.9924	0.0349
54	3.0270	0.0346
55	3.0614	0.0344
56	3.0956	0.0342
57	3.1295	0.0339
58	3.1632	0.0337
59	3.1967	0.0335
60	3.2299	0.0333
61	3.2630	0.0331
62	3.2958	0.0328
63	3.3285	0.0326
64	3.3609	0.0324
65	3.3932	0.0322
66	3.4252	0.0321
67	3.4571	0.0319
68	3.4888	0.0317
69	3.5203	0.0315
70	3.5516	0.0313
71	3.5828	0.0312
72	3.6138	0.0310
73	3.6474	0.0336
74	3.6809	0.0335
75	3.7142	0.0333
76	3.7474	0.0332
77	3.7804	0.0330
78	3.8133	0.0329
79	3.8460	0.0327
80	3.8786	0.0326
81	3.9111	0.0325

82	3.9435	0.0323
83	3.9757	0.0322
84	4.0078	0.0321
85	4.0397	0.0320
86	4.0716	0.0318
87	4.1033	0.0317
88	4.1349	0.0316
89	4.1664	0.0315
90	4.1978	0.0314
91	4.2290	0.0313
92	4.2602	0.0311
93	4.2912	0.0310
94	4.3221	0.0309
95	4.3529	0.0308
96	4.3836	0.0307
97	4.4142	0.0306
98	4.4447	0.0305
99	4.4751	0.0304
100	4.5054	0.0303
101	4.5356	0.0302
102	4.5657	0.0301
103	4.5957	0.0300
104	4.6256	0.0299
105	4.6554	0.0298
106	4.6851	0.0297
107	4.7148	0.0296
108	4.7443	0.0295
109	4.7737	0.0294
110	4.8031	0.0294
111	4.8324	0.0293
112	4.8615	0.0292
113	4.8906	0.0291
114	4.9197	0.0290
115	4.9486	0.0289
116	4.9774	0.0288
117	5.0062	0.0288
118	5.0349	0.0287
119	5.0635	0.0286
120	5.0920	0.0285
121	5.1204	0.0284
122	5.1488	0.0284
123	5.1771	0.0283
124	5.2053	0.0282
125	5.2335	0.0281
126	5.2615	0.0281
127	5.2895	0.0280
128	5.3175	0.0279
129	5.3453	0.0279
130	5.3731	0.0278
131	5.4008	0.0277
132	5.4284	0.0276
133	5.4560	0.0276
134	5.4835	0.0275
135	5.5110	0.0274
136	5.5383	0.0274
137	5.5656	0.0273
138	5.5929	0.0272
139	5.6200	0.0272
140	5.6472	0.0271
141	5.6742	0.0270
142	5.7012	0.0270
143	5.7281	0.0269
144	5.7550	0.0269
145	5.7818	0.0268
146	5.8085	0.0267
147	5.8352	0.0267
148	5.8618	0.0266
149	5.8883	0.0266
150	5.9148	0.0265
151	5.9413	0.0264
152	5.9677	0.0264

153	5.9940	0.0263
154	6.0203	0.0263
155	6.0465	0.0262
156	6.0726	0.0262
157	6.0987	0.0261
158	6.1248	0.0260
159	6.1508	0.0260
160	6.1767	0.0259
161	6.2026	0.0259
162	6.2285	0.0258
163	6.2542	0.0258
164	6.2800	0.0257
165	6.3057	0.0257
166	6.3313	0.0256
167	6.3569	0.0256
168	6.3824	0.0255
169	6.4079	0.0255
170	6.4333	0.0254
171	6.4587	0.0254
172	6.4840	0.0253
173	6.5093	0.0253
174	6.5345	0.0252
175	6.5597	0.0252
176	6.5848	0.0251
177	6.6099	0.0251
178	6.6350	0.0250
179	6.6600	0.0250
180	6.6849	0.0250
181	6.7098	0.0249
182	6.7347	0.0249
183	6.7595	0.0248
184	6.7843	0.0248
185	6.8090	0.0247
186	6.8337	0.0247
187	6.8584	0.0246
188	6.8830	0.0246
189	6.9075	0.0246
190	6.9320	0.0245
191	6.9565	0.0245
192	6.9809	0.0244
193	7.0053	0.0244
194	7.0297	0.0243
195	7.0540	0.0243
196	7.0782	0.0243
197	7.1024	0.0242
198	7.1266	0.0242
199	7.1508	0.0241
200	7.1749	0.0241
201	7.1989	0.0241
202	7.2230	0.0240
203	7.2469	0.0240
204	7.2709	0.0239
205	7.2948	0.0239
206	7.3187	0.0239
207	7.3425	0.0238
208	7.3663	0.0238
209	7.3900	0.0238
210	7.4138	0.0237
211	7.4374	0.0237
212	7.4611	0.0236
213	7.4847	0.0236
214	7.5083	0.0236
215	7.5318	0.0235
216	7.5553	0.0235
217	7.5788	0.0235
218	7.6022	0.0234
219	7.6256	0.0234
220	7.6489	0.0234
221	7.6722	0.0233
222	7.6955	0.0233
223	7.7188	0.0233

224	7.7420	0.0232
225	7.7652	0.0232
226	7.7883	0.0232
227	7.8115	0.0231
228	7.8345	0.0231
229	7.8576	0.0231
230	7.8806	0.0230
231	7.9036	0.0230
232	7.9265	0.0230
233	7.9495	0.0229
234	7.9724	0.0229
235	7.9952	0.0229
236	8.0180	0.0228
237	8.0408	0.0228
238	8.0636	0.0228
239	8.0863	0.0227
240	8.1090	0.0227
241	8.1317	0.0227
242	8.1543	0.0226
243	8.1769	0.0226
244	8.1995	0.0226
245	8.2220	0.0225
246	8.2445	0.0225
247	8.2670	0.0225
248	8.2895	0.0225
249	8.3119	0.0224
250	8.3343	0.0224
251	8.3567	0.0224
252	8.3790	0.0223
253	8.4013	0.0223
254	8.4236	0.0223
255	8.4458	0.0222
256	8.4680	0.0222
257	8.4902	0.0222
258	8.5124	0.0222
259	8.5345	0.0221
260	8.5566	0.0221
261	8.5787	0.0221
262	8.6008	0.0221
263	8.6228	0.0220
264	8.6448	0.0220
265	8.6668	0.0220
266	8.6887	0.0219
267	8.7106	0.0219
268	8.7325	0.0219
269	8.7544	0.0219
270	8.7762	0.0218
271	8.7980	0.0218
272	8.8198	0.0218
273	8.8415	0.0218
274	8.8633	0.0217
275	8.8850	0.0217
276	8.9066	0.0217
277	8.9283	0.0216
278	8.9499	0.0216
279	8.9715	0.0216
280	8.9931	0.0216
281	9.0146	0.0215
282	9.0362	0.0215
283	9.0577	0.0215
284	9.0791	0.0215
285	9.1006	0.0214
286	9.1220	0.0214
287	9.1434	0.0214
288	9.1648	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0095	0.0119

2	0.0214	0.0095	0.0119
3	0.0214	0.0095	0.0119
4	0.0215	0.0095	0.0120
5	0.0215	0.0095	0.0120
6	0.0215	0.0095	0.0120
7	0.0216	0.0096	0.0120
8	0.0216	0.0096	0.0120
9	0.0217	0.0096	0.0121
10	0.0217	0.0096	0.0121
11	0.0218	0.0096	0.0121
12	0.0218	0.0096	0.0121
13	0.0218	0.0097	0.0122
14	0.0219	0.0097	0.0122
15	0.0219	0.0097	0.0122
16	0.0219	0.0097	0.0122
17	0.0220	0.0097	0.0123
18	0.0220	0.0098	0.0123
19	0.0221	0.0098	0.0123
20	0.0221	0.0098	0.0123
21	0.0222	0.0098	0.0123
22	0.0222	0.0098	0.0124
23	0.0222	0.0099	0.0124
24	0.0223	0.0099	0.0124
25	0.0223	0.0099	0.0124
26	0.0224	0.0099	0.0125
27	0.0224	0.0099	0.0125
28	0.0225	0.0099	0.0125
29	0.0225	0.0100	0.0125
30	0.0225	0.0100	0.0126
31	0.0226	0.0100	0.0126
32	0.0226	0.0100	0.0126
33	0.0227	0.0101	0.0126
34	0.0227	0.0101	0.0127
35	0.0228	0.0101	0.0127
36	0.0228	0.0101	0.0127
37	0.0229	0.0101	0.0127
38	0.0229	0.0102	0.0128
39	0.0230	0.0102	0.0128
40	0.0230	0.0102	0.0128
41	0.0231	0.0102	0.0129
42	0.0231	0.0102	0.0129
43	0.0232	0.0103	0.0129
44	0.0232	0.0103	0.0129
45	0.0233	0.0103	0.0130
46	0.0233	0.0103	0.0130
47	0.0234	0.0104	0.0130
48	0.0234	0.0104	0.0131
49	0.0235	0.0104	0.0131
50	0.0235	0.0104	0.0131
51	0.0236	0.0105	0.0132
52	0.0236	0.0105	0.0132
53	0.0237	0.0105	0.0132
54	0.0238	0.0105	0.0132
55	0.0238	0.0106	0.0133
56	0.0239	0.0106	0.0133
57	0.0239	0.0106	0.0133
58	0.0240	0.0106	0.0134
59	0.0241	0.0107	0.0134
60	0.0241	0.0107	0.0134
61	0.0242	0.0107	0.0135
62	0.0242	0.0107	0.0135
63	0.0243	0.0108	0.0135
64	0.0243	0.0108	0.0136
65	0.0244	0.0108	0.0136
66	0.0245	0.0108	0.0136
67	0.0246	0.0109	0.0137
68	0.0246	0.0109	0.0137
69	0.0247	0.0109	0.0138
70	0.0247	0.0110	0.0138
71	0.0248	0.0110	0.0138
72	0.0249	0.0110	0.0139

73	0.0250	0.0111	0.0139
74	0.0250	0.0111	0.0139
75	0.0251	0.0111	0.0140
76	0.0251	0.0111	0.0140
77	0.0252	0.0112	0.0141
78	0.0253	0.0112	0.0141
79	0.0254	0.0112	0.0141
80	0.0254	0.0113	0.0142
81	0.0255	0.0113	0.0142
82	0.0256	0.0113	0.0142
83	0.0257	0.0114	0.0143
84	0.0257	0.0114	0.0143
85	0.0258	0.0114	0.0144
86	0.0259	0.0115	0.0144
87	0.0260	0.0115	0.0145
88	0.0260	0.0115	0.0145
89	0.0262	0.0116	0.0146
90	0.0262	0.0116	0.0146
91	0.0263	0.0117	0.0147
92	0.0264	0.0117	0.0147
93	0.0265	0.0117	0.0148
94	0.0266	0.0118	0.0148
95	0.0267	0.0118	0.0149
96	0.0267	0.0118	0.0149
97	0.0269	0.0119	0.0150
98	0.0269	0.0119	0.0150
99	0.0270	0.0120	0.0151
100	0.0271	0.0120	0.0151
101	0.0272	0.0121	0.0152
102	0.0273	0.0121	0.0152
103	0.0274	0.0122	0.0153
104	0.0275	0.0122	0.0153
105	0.0276	0.0122	0.0154
106	0.0277	0.0123	0.0154
107	0.0279	0.0123	0.0155
108	0.0279	0.0124	0.0156
109	0.0281	0.0124	0.0156
110	0.0281	0.0125	0.0157
111	0.0283	0.0125	0.0158
112	0.0284	0.0126	0.0158
113	0.0285	0.0126	0.0159
114	0.0286	0.0127	0.0159
115	0.0288	0.0127	0.0160
116	0.0288	0.0128	0.0161
117	0.0290	0.0128	0.0162
118	0.0291	0.0129	0.0162
119	0.0293	0.0130	0.0163
120	0.0294	0.0130	0.0164
121	0.0295	0.0131	0.0165
122	0.0296	0.0131	0.0165
123	0.0298	0.0132	0.0166
124	0.0299	0.0132	0.0167
125	0.0301	0.0133	0.0168
126	0.0302	0.0134	0.0168
127	0.0304	0.0135	0.0169
128	0.0305	0.0135	0.0170
129	0.0307	0.0136	0.0171
130	0.0308	0.0136	0.0172
131	0.0310	0.0137	0.0173
132	0.0311	0.0138	0.0173
133	0.0314	0.0139	0.0175
134	0.0315	0.0139	0.0175
135	0.0317	0.0140	0.0177
136	0.0318	0.0141	0.0177
137	0.0321	0.0142	0.0179
138	0.0322	0.0143	0.0179
139	0.0325	0.0144	0.0181
140	0.0326	0.0144	0.0182
141	0.0329	0.0146	0.0183
142	0.0330	0.0146	0.0184
143	0.0333	0.0148	0.0186

144	0.0335	0.0148	0.0186
145	0.0310	0.0137	0.0173
146	0.0312	0.0138	0.0174
147	0.0315	0.0140	0.0176
148	0.0317	0.0140	0.0177
149	0.0321	0.0142	0.0179
150	0.0322	0.0143	0.0180
151	0.0326	0.0145	0.0182
152	0.0328	0.0145	0.0183
153	0.0333	0.0147	0.0185
154	0.0335	0.0148	0.0187
155	0.0339	0.0150	0.0189
156	0.0342	0.0151	0.0190
157	0.0346	0.0153	0.0193
158	0.0349	0.0155	0.0194
159	0.0354	0.0157	0.0197
160	0.0357	0.0158	0.0199
161	0.0363	0.0161	0.0202
162	0.0366	0.0162	0.0204
163	0.0372	0.0165	0.0207
164	0.0375	0.0166	0.0209
165	0.0382	0.0169	0.0213
166	0.0386	0.0171	0.0215
167	0.0393	0.0174	0.0219
168	0.0397	0.0176	0.0221
169	0.0406	0.0180	0.0226
170	0.0411	0.0182	0.0229
171	0.0420	0.0186	0.0234
172	0.0425	0.0188	0.0237
173	0.0436	0.0193	0.0243
174	0.0442	0.0196	0.0246
175	0.0454	0.0201	0.0253
176	0.0461	0.0204	0.0257
177	0.0476	0.0211	0.0265
178	0.0484	0.0214	0.0269
179	0.0501	0.0222	0.0279
180	0.0511	0.0226	0.0285
181	0.0533	0.0236	0.0297
182	0.0545	0.0241	0.0304
183	0.0572	0.0254	0.0319
184	0.0588	0.0261	0.0328
185	0.0309	0.0137	0.0172
186	0.0329	0.0146	0.0183
187	0.0381	0.0169	0.0212
188	0.0416	0.0184	0.0232
189	0.0518	0.0229	0.0288
190	0.0596	0.0264	0.0332
191	0.0905	0.0401	0.0504
192	0.1313	0.0482	0.0832
193	0.5682	0.0482	0.5201
194	0.0712	0.0315	0.0397
195	0.0460	0.0204	0.0256
196	0.0353	0.0156	0.0197
197	0.0606	0.0268	0.0338
198	0.0558	0.0247	0.0311
199	0.0521	0.0231	0.0290
200	0.0492	0.0218	0.0274
201	0.0468	0.0207	0.0261
202	0.0448	0.0198	0.0250
203	0.0430	0.0191	0.0240
204	0.0415	0.0184	0.0231
205	0.0401	0.0178	0.0224
206	0.0389	0.0172	0.0217
207	0.0379	0.0168	0.0211
208	0.0369	0.0163	0.0205
209	0.0360	0.0159	0.0200
210	0.0352	0.0156	0.0196
211	0.0344	0.0152	0.0192
212	0.0337	0.0149	0.0188
213	0.0331	0.0146	0.0184
214	0.0324	0.0144	0.0181

215	0.0319	0.0141	0.0178
216	0.0313	0.0139	0.0175
217	0.0336	0.0149	0.0187
218	0.0332	0.0147	0.0185
219	0.0327	0.0145	0.0182
220	0.0323	0.0143	0.0180
221	0.0320	0.0142	0.0178
222	0.0316	0.0140	0.0176
223	0.0313	0.0138	0.0174
224	0.0309	0.0137	0.0172
225	0.0306	0.0136	0.0170
226	0.0303	0.0134	0.0169
227	0.0300	0.0133	0.0167
228	0.0297	0.0132	0.0166
229	0.0294	0.0130	0.0164
230	0.0292	0.0129	0.0163
231	0.0289	0.0128	0.0161
232	0.0287	0.0127	0.0160
233	0.0284	0.0126	0.0158
234	0.0282	0.0125	0.0157
235	0.0280	0.0124	0.0156
236	0.0278	0.0123	0.0155
237	0.0276	0.0122	0.0154
238	0.0274	0.0121	0.0152
239	0.0272	0.0120	0.0151
240	0.0270	0.0120	0.0150
241	0.0268	0.0119	0.0149
242	0.0266	0.0118	0.0148
243	0.0264	0.0117	0.0147
244	0.0263	0.0116	0.0146
245	0.0261	0.0116	0.0145
246	0.0259	0.0115	0.0145
247	0.0258	0.0114	0.0144
248	0.0256	0.0114	0.0143
249	0.0255	0.0113	0.0142
250	0.0253	0.0112	0.0141
251	0.0252	0.0112	0.0140
252	0.0250	0.0111	0.0140
253	0.0249	0.0110	0.0139
254	0.0248	0.0110	0.0138
255	0.0246	0.0109	0.0137
256	0.0245	0.0109	0.0137
257	0.0244	0.0108	0.0136
258	0.0243	0.0107	0.0135
259	0.0241	0.0107	0.0134
260	0.0240	0.0106	0.0134
261	0.0239	0.0106	0.0133
262	0.0238	0.0105	0.0133
263	0.0237	0.0105	0.0132
264	0.0236	0.0104	0.0131
265	0.0235	0.0104	0.0131
266	0.0234	0.0103	0.0130
267	0.0233	0.0103	0.0130
268	0.0232	0.0103	0.0129
269	0.0231	0.0102	0.0128
270	0.0230	0.0102	0.0128
271	0.0229	0.0101	0.0127
272	0.0228	0.0101	0.0127
273	0.0227	0.0100	0.0126
274	0.0226	0.0100	0.0126
275	0.0225	0.0100	0.0125
276	0.0224	0.0099	0.0125
277	0.0223	0.0099	0.0124
278	0.0222	0.0098	0.0124
279	0.0221	0.0098	0.0123
280	0.0221	0.0098	0.0123
281	0.0220	0.0097	0.0122
282	0.0219	0.0097	0.0122
283	0.0218	0.0097	0.0121
284	0.0217	0.0096	0.0121
285	0.0216	0.0096	0.0121

```
      286              0.0216           0.0096              0.0120
      287              0.0215           0.0095              0.0120
      288              0.0214           0.0095              0.0119
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      3.85(In)
      Total effective rainfall =      5.32(In)
      Peak flow rate in flood hydrograph =     69.63(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       17.5      35.0      52.5      70.0
----------------------------------------------------------------------------
  0+ 5       0.0010      0.14  Q         |         |         |         |
  0+10       0.0059      0.71  Q         |         |         |         |
  0+15       0.0203      2.09  VQ        |         |         |         |
  0+20       0.0390      2.72  VQ        |         |         |         |
  0+25       0.0600      3.05  VQ        |         |         |         |
  0+30       0.0825      3.27  VQ        |         |         |         |
  0+35       0.1061      3.43  VQ        |         |         |         |
  0+40       0.1305      3.53  V Q       |         |         |         |
  0+45       0.1553      3.60  V Q       |         |         |         |
  0+50       0.1803      3.64  V Q       |         |         |         |
  0+55       0.2056      3.66  V Q       |         |         |         |
  1+ 0       0.2309      3.68  V Q       |         |         |         |
  1+ 5       0.2564      3.70  V Q       |         |         |         |
  1+10       0.2820      3.72  |VQ       |         |         |         |
  1+15       0.3077      3.73  |VQ       |         |         |         |
  1+20       0.3334      3.74  |VQ       |         |         |         |
  1+25       0.3592      3.75  |VQ       |         |         |         |
  1+30       0.3850      3.75  |VQ       |         |         |         |
  1+35       0.4109      3.76  |VQ       |         |         |         |
  1+40       0.4369      3.77  |VQ       |         |         |         |
  1+45       0.4629      3.77  |VQ       |         |         |         |
  1+50       0.4889      3.78  |VQ       |         |         |         |
  1+55       0.5150      3.79  |VQ       |         |         |         |
  2+ 0       0.5411      3.79  |VQ       |         |         |         |
  2+ 5       0.5673      3.80  | Q       |         |         |         |
  2+10       0.5936      3.81  | Q       |         |         |         |
  2+15       0.6198      3.82  | Q       |         |         |         |
  2+20       0.6462      3.82  | Q       |         |         |         |
  2+25       0.6726      3.83  | Q       |         |         |         |
  2+30       0.6990      3.84  | Q       |         |         |         |
  2+35       0.7255      3.85  | Q       |         |         |         |
  2+40       0.7521      3.85  | Q       |         |         |         |
  2+45       0.7787      3.86  | Q       |         |         |         |
  2+50       0.8053      3.87  | Q       |         |         |         |
  2+55       0.8320      3.88  | Q       |         |         |         |
  3+ 0       0.8588      3.89  | QV      |         |         |         |
  3+ 5       0.8856      3.89  | QV      |         |         |         |
  3+10       0.9125      3.90  | QV      |         |         |         |
  3+15       0.9394      3.91  | QV      |         |         |         |
  3+20       0.9664      3.92  | QV      |         |         |         |
  3+25       0.9935      3.93  | QV      |         |         |         |
  3+30       1.0206      3.94  | QV      |         |         |         |
  3+35       1.0478      3.94  | QV      |         |         |         |
  3+40       1.0750      3.95  | QV      |         |         |         |
  3+45       1.1023      3.96  | QV      |         |         |         |
  3+50       1.1296      3.97  | Q V     |         |         |         |
  3+55       1.1570      3.98  | Q V     |         |         |         |
  4+ 0       1.1845      3.99  | Q V     |         |         |         |
  4+ 5       1.2120      4.00  | Q V     |         |         |         |
  4+10       1.2396      4.01  | Q V     |         |         |         |
  4+15       1.2672      4.01  | Q V     |         |         |         |
  4+20       1.2949      4.02  | Q V     |         |         |         |
  4+25       1.3227      4.03  | Q V     |         |         |         |
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 4+30       1.3506      4.04  | Q V     |         |         |         |
 4+35       1.3785      4.05  | Q V     |         |         |         |
 4+40       1.4064      4.06  | Q V     |         |         |         |
 4+45       1.4345      4.07  | Q  V    |         |         |         |
 4+50       1.4626      4.08  | Q  V    |         |         |         |
 4+55       1.4907      4.09  | Q  V    |         |         |         |
 5+ 0       1.5190      4.10  | Q  V    |         |         |         |
 5+ 5       1.5473      4.11  | Q  V    |         |         |         |
 5+10       1.5757      4.12  | Q  V    |         |         |         |
 5+15       1.6041      4.13  | Q  V    |         |         |         |
 5+20       1.6326      4.14  | Q  V    |         |         |         |
 5+25       1.6612      4.15  | Q  V    |         |         |         |
 5+30       1.6899      4.16  | Q   V   |         |         |         |
 5+35       1.7186      4.17  | Q   V   |         |         |         |
 5+40       1.7474      4.18  | Q   V   |         |         |         |
 5+45       1.7763      4.19  | Q   V   |         |         |         |
 5+50       1.8053      4.20  | Q   V   |         |         |         |
 5+55       1.8343      4.22  | Q   V   |         |         |         |
 6+ 0       1.8634      4.23  | Q   V   |         |         |         |
 6+ 5       1.8926      4.24  | Q   V   |         |         |         |
 6+10       1.9219      4.25  | Q   V   |         |         |         |
 6+15       1.9512      4.26  | Q   V   |         |         |         |
 6+20       1.9806      4.27  | Q    V  |         |         |         |
 6+25       2.0102      4.28  | Q    V  |         |         |         |
 6+30       2.0397      4.30  | Q    V  |         |         |         |
 6+35       2.0694      4.31  | Q    V  |         |         |         |
 6+40       2.0992      4.32  | Q    V  |         |         |         |
 6+45       2.1290      4.33  | Q    V  |         |         |         |
 6+50       2.1590      4.35  | Q    V  |         |         |         |
 6+55       2.1890      4.36  | Q    V  |         |         |         |
 7+ 0       2.2191      4.37  | Q    V  |         |         |         |
 7+ 5       2.2493      4.38  | Q    V  |         |         |         |
 7+10       2.2795      4.40  | Q     V |         |         |         |
 7+15       2.3099      4.41  | Q     V |         |         |         |
 7+20       2.3404      4.42  | Q     V |         |         |         |
 7+25       2.3710      4.44  | Q     V |         |         |         |
 7+30       2.4016      4.45  | Q     V |         |         |         |
 7+35       2.4324      4.47  | Q     V |         |         |         |
 7+40       2.4632      4.48  | Q     V |         |         |         |
 7+45       2.4942      4.49  | Q     V |         |         |         |
 7+50       2.5252      4.51  | Q     V |         |         |         |
 7+55       2.5564      4.52  | Q      V|         |         |         |
 8+ 0       2.5876      4.54  | Q      V|         |         |         |
 8+ 5       2.6190      4.55  | Q      V|         |         |         |
 8+10       2.6504      4.57  | Q      V|         |         |         |
 8+15       2.6820      4.58  | Q      V|         |         |         |
 8+20       2.7137      4.60  | Q      V|         |         |         |
 8+25       2.7454      4.62  | Q      V|         |         |         |
 8+30       2.7773      4.63  | Q      V|         |         |         |
 8+35       2.8093      4.65  | Q      V|         |         |         |
 8+40       2.8415      4.66  | Q       V         |         |         |
 8+45       2.8737      4.68  | Q       V         |         |         |
 8+50       2.9061      4.70  | Q       V         |         |         |
 8+55       2.9385      4.72  | Q       V         |         |         |
 9+ 0       2.9711      4.73  | Q       V         |         |         |
 9+ 5       3.0038      4.75  | Q       V         |         |         |
 9+10       3.0367      4.77  | Q       V         |         |         |
 9+15       3.0697      4.79  | Q       V         |         |         |
 9+20       3.1028      4.81  | Q       |V        |         |         |
 9+25       3.1360      4.83  | Q       |V        |         |         |
 9+30       3.1694      4.84  | Q       |V        |         |         |
 9+35       3.2029      4.86  | Q       |V        |         |         |
 9+40       3.2365      4.88  | Q       |V        |         |         |
 9+45       3.2703      4.90  | Q       |V        |         |         |
 9+50       3.3042      4.92  | Q       |V        |         |         |
 9+55       3.3383      4.95  | Q       |V        |         |         |
10+ 0       3.3725      4.97  | Q       |V        |         |         |
10+ 5       3.4068      4.99  | Q       | V       |         |         |
10+10       3.4413      5.01  | Q       | V       |         |         |
10+15       3.4760      5.03  | Q       | V       |         |         |
10+20       3.5108      5.06  | Q       | V       |         |         |
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10+25       3.5458      5.08  | Q       | V       |         |         |
10+30       3.5810      5.10  | Q       | V       |         |         |
10+35       3.6163      5.13  | Q       | V       |         |         |
10+40       3.6518      5.15  | Q       | V       |         |         |
10+45       3.6875      5.18  | Q       |  V      |         |         |
10+50       3.7233      5.20  | Q       |  V      |         |         |
10+55       3.7593      5.23  | Q       |  V      |         |         |
11+ 0       3.7955      5.26  |  Q      |  V      |         |         |
11+ 5       3.8319      5.29  |  Q      |  V      |         |         |
11+10       3.8685      5.31  |  Q      |  V      |         |         |
11+15       3.9053      5.34  |  Q      |  V      |         |         |
11+20       3.9423      5.37  |  Q      |   V     |         |         |
11+25       3.9795      5.40  |  Q      |   V     |         |         |
11+30       4.0169      5.43  |  Q      |   V     |         |         |
11+35       4.0545      5.46  |  Q      |   V     |         |         |
11+40       4.0924      5.49  |  Q      |   V     |         |         |
11+45       4.1305      5.53  |  Q      |   V     |         |         |
11+50       4.1688      5.56  |  Q      |   V     |         |         |
11+55       4.2073      5.60  |  Q      |   V     |         |         |
12+ 0       4.2461      5.63  |  Q      |    V    |         |         |
12+ 5       4.2850      5.65  |  Q      |    V    |         |         |
12+10       4.3236      5.61  |  Q      |    V    |         |         |
12+15       4.3613      5.47  |  Q      |    V    |         |         |
12+20       4.3988      5.43  |  Q      |    V    |         |         |
12+25       4.4362      5.43  |  Q      |    V    |         |         |
12+30       4.4737      5.45  |  Q      |    V    |         |         |
12+35       4.5114      5.48  |  Q      |     V   |         |         |
12+40       4.5493      5.51  |  Q      |     V   |         |         |
12+45       4.5876      5.55  |  Q      |     V   |         |         |
12+50       4.6261      5.60  |  Q      |     V   |         |         |
12+55       4.6650      5.65  |  Q      |     V   |         |         |
13+ 0       4.7043      5.70  |  Q      |     V   |         |         |
13+ 5       4.7439      5.76  |  Q      |     V   |         |         |
13+10       4.7839      5.81  |  Q      |     V   |         |         |
13+15       4.8244      5.87  |  Q      |      V  |         |         |
13+20       4.8652      5.93  |  Q      |      V  |         |         |
13+25       4.9066      6.00  |  Q      |      V  |         |         |
13+30       4.9483      6.07  |  Q      |      V  |         |         |
13+35       4.9906      6.14  |  Q      |      V  |         |         |
13+40       5.0334      6.21  |  Q      |      V  |         |         |
13+45       5.0767      6.29  |  Q      |       V |         |         |
13+50       5.1206      6.37  |  Q      |       V |         |         |
13+55       5.1651      6.46  |  Q      |       V |         |         |
14+ 0       5.2101      6.54  |  Q      |       V |         |         |
14+ 5       5.2558      6.64  |  Q      |       V |         |         |
14+10       5.3022      6.74  |  Q      |       V |         |         |
14+15       5.3494      6.85  |  Q      |        V|         |         |
14+20       5.3973      6.95  |  Q      |        V|         |         |
14+25       5.4460      7.08  |   Q     |        V|         |         |
14+30       5.4956      7.20  |   Q     |        V|         |         |
14+35       5.5461      7.34  |   Q     |        V|         |         |
14+40       5.5976      7.47  |   Q     |        V|         |         |
14+45       5.6502      7.63  |   Q     |         V         |         |
14+50       5.7038      7.79  |   Q     |         V         |         |
14+55       5.7587      7.98  |   Q     |         V         |         |
15+ 0       5.8149      8.16  |   Q     |         V         |         |
15+ 5       5.8727      8.38  |   Q     |         V         |         |
15+10       5.9319      8.61  |   Q     |         |V        |         |
15+15       5.9931      8.88  |    Q    |         |V        |         |
15+20       6.0562      9.16  |    Q    |         |V        |         |
15+25       6.1202      9.30  |    Q    |         |V        |         |
15+30       6.1808      8.80  |    Q    |         |V        |         |
15+35       6.2305      7.22  |   Q     |         | V       |         |
15+40       6.2772      6.78  |  Q      |         | V       |         |
15+45       6.3252      6.96  |  Q      |         | V       |         |
15+50       6.3764      7.44  |   Q     |         | V       |         |
15+55       6.4352      8.54  |   Q     |         | V       |         |
16+ 0       6.5079     10.55  |     Q   |         |  V      |         |
16+ 5       6.6427     19.58  |         |Q        |  V      |         |
16+10       6.9188     40.08  |         |         | Q V     |         |
16+15       7.3984     69.63  |         |         |     V   |        Q|
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16+20      7.6551    37.27  |          |          |Q     V  |          |
16+25      7.8168    23.48  |          |  Q       |      V  |          |
16+30      7.9408    18.00  |          Q          |       V |          |
16+35      8.0503    15.90  |         Q|          |       V |          |
16+40      8.1443    13.65  |       Q  |          |       V |          |
16+45      8.2247    11.67  |     Q    |          |         V|          |
16+50      8.2927     9.86  |    Q     |          |         V|          |
16+55      8.3553     9.09  |    Q     |          |         V|          |
17+ 0      8.4144     8.58  |   Q      |          |         V|          |
17+ 5      8.4710     8.22  |   Q      |          |          V          |
17+10      8.5252     7.88  |   Q      |          |          V          |
17+15      8.5761     7.39  |   Q      |          |          V          |
17+20      8.6245     7.02  |   Q      |          |          V          |
17+25      8.6706     6.70  |  Q       |          |          V          |
17+30      8.7155     6.51  |  Q       |          |          V          |
17+35      8.7592     6.34  |  Q       |          |          |V         |
17+40      8.8018     6.19  |  Q       |          |          |V         |
17+45      8.8434     6.04  |  Q       |          |          |V         |
17+50      8.8841     5.91  |  Q       |          |          |V         |
17+55      8.9240     5.79  |  Q       |          |          |V         |
18+ 0      8.9630     5.67  |  Q       |          |          |V         |
18+ 5      9.0015     5.58  |  Q       |          |          |V         |
18+10      9.0398     5.56  |  Q       |          |          | V        |
18+15      9.0787     5.65  |  Q       |          |          | V        |
18+20      9.1175     5.64  |  Q       |          |          | V        |
18+25      9.1561     5.61  |  Q       |          |          | V        |
18+30      9.1945     5.56  |  Q       |          |          | V        |
18+35      9.2324     5.51  |  Q       |          |          | V        |
18+40      9.2700     5.46  |  Q       |          |          | V        |
18+45      9.3072     5.40  |  Q       |          |          |  V       |
18+50      9.3440     5.35  |  Q       |          |          |  V       |
18+55      9.3805     5.29  |  Q       |          |          |  V       |
19+ 0      9.4165     5.24  | Q        |          |          |  V       |
19+ 5      9.4523     5.19  | Q        |          |          |  V       |
19+10      9.4876     5.14  | Q        |          |          |  V       |
19+15      9.5227     5.09  | Q        |          |          |  V       |
19+20      9.5574     5.04  | Q        |          |          |  V       |
19+25      9.5918     5.00  | Q        |          |          |   V      |
19+30      9.6260     4.95  | Q        |          |          |   V      |
19+35      9.6598     4.91  | Q        |          |          |   V      |
19+40      9.6933     4.87  | Q        |          |          |   V      |
19+45      9.7266     4.83  | Q        |          |          |   V      |
19+50      9.7596     4.79  | Q        |          |          |   V      |
19+55      9.7924     4.76  | Q        |          |          |   V      |
20+ 0      9.8249     4.72  | Q        |          |          |   V      |
20+ 5      9.8572     4.69  | Q        |          |          |    V     |
20+10      9.8892     4.65  | Q        |          |          |    V     |
20+15      9.9211     4.62  | Q        |          |          |    V     |
20+20      9.9527     4.59  | Q        |          |          |    V     |
20+25      9.9841     4.56  | Q        |          |          |    V     |
20+30     10.0152     4.53  | Q        |          |          |    V     |
20+35     10.0462     4.50  | Q        |          |          |    V     |
20+40     10.0770     4.47  | Q        |          |          |    V     |
20+45     10.1076     4.44  | Q        |          |          |    V     |
20+50     10.1380     4.41  | Q        |          |          |     V    |
20+55     10.1682     4.39  | Q        |          |          |     V    |
21+ 0     10.1983     4.36  | Q        |          |          |     V    |
21+ 5     10.2282     4.34  | Q        |          |          |     V    |
21+10     10.2579     4.31  | Q        |          |          |     V    |
21+15     10.2874     4.29  | Q        |          |          |     V    |
21+20     10.3168     4.27  | Q        |          |          |     V    |
21+25     10.3460     4.24  | Q        |          |          |     V    |
21+30     10.3750     4.22  | Q        |          |          |     V    |
21+35     10.4039     4.20  | Q        |          |          |     V    |
21+40     10.4327     4.18  | Q        |          |          |      V   |
21+45     10.4613     4.15  | Q        |          |          |      V   |
21+50     10.4898     4.13  | Q        |          |          |      V   |
21+55     10.5181     4.11  | Q        |          |          |      V   |
22+ 0     10.5463     4.09  | Q        |          |          |      V   |
22+ 5     10.5744     4.07  | Q        |          |          |      V   |
22+10     10.6023     4.05  | Q        |          |          |      V   |
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  22+15      10.6301      4.04  | Q       |         |         |      V  |
  22+20      10.6578      4.02  | Q       |         |         |      V  |
  22+25      10.6853      4.00  | Q       |         |         |      V  |
  22+30      10.7127      3.98  | Q       |         |         |       V |
  22+35      10.7400      3.96  | Q       |         |         |       V |
  22+40      10.7672      3.95  | Q       |         |         |       V |
  22+45      10.7943      3.93  | Q       |         |         |       V |
  22+50      10.8212      3.91  | Q       |         |         |       V |
  22+55      10.8481      3.90  | Q       |         |         |       V |
  23+ 0      10.8748      3.88  | Q       |         |         |       V |
  23+ 5      10.9014      3.87  | Q       |         |         |       V |
  23+10      10.9279      3.85  | Q       |         |         |       V |
  23+15      10.9543      3.83  | Q       |         |         |       V |
  23+20      10.9806      3.82  | Q       |         |         |        V|
  23+25      11.0068      3.80  | Q       |         |         |        V|
  23+30      11.0329      3.79  | Q       |         |         |        V|
  23+35      11.0589      3.78  | Q       |         |         |        V|
  23+40      11.0848      3.76  | Q       |         |         |        V|
  23+45      11.1107      3.75  | Q       |         |         |        V|
  23+50      11.1364      3.73  | Q       |         |         |        V|
  23+55      11.1620      3.72  | Q       |         |         |        V|
  24+ 0      11.1875      3.71  | Q       |         |         |        V|
  24+ 5      11.2120      3.56  | Q       |         |         |        V|
  24+10      11.2325      2.97  |Q        |         |         |        V|
  24+15      11.2433      1.58  Q         |         |         |        V|
  24+20      11.2499      0.96  Q         |         |         |        V|
  24+25      11.2542      0.62  Q         |         |         |        V|
  24+30      11.2570      0.41  Q         |         |         |        V|
  24+35      11.2588      0.26  Q         |         |         |        V|
  24+40      11.2598      0.15  Q         |         |         |        V|
  24+45      11.2605      0.09  Q         |         |         |        V|
  24+50      11.2609      0.06  Q         |         |         |        V|
  24+55      11.2612      0.04  Q         |         |         |        V|
  25+ 0      11.2614      0.03  Q         |         |         |        V|
  25+ 5      11.2616      0.02  Q         |         |         |        V|
  25+10      11.2616      0.01  Q         |         |         |        V|
  25+15      11.2616      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

Area ‘G’ – 100 Year 24 Hour - Existing Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  11/14/24

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------------------------------------------

San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - EXISTING PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'G'
100 YEAR 24 HOUR STORM
NOVEMBER 4, 2024
------------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            25.42            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            25.42           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            25.42           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 67.0      84.6         25.42      1.000     0.290    1.000    0.290

Area-averaged adjusted loss rate Fm (In/Hr) =  0.290

********* Area-Averaged low loss rate fraction, Yb **********
```

```
Area       Area          SCS CN    SCS CN      S     Pervious
 (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
    25.42   1.000         67.0      84.6       1.82     0.838

Area-averaged catchment yield fraction, Y =  0.838
Area-averaged low loss fraction, Yb =  0.162
User entry of time of concentration  =   0.228 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area =      25.42(Ac.)
Catchment Lag time =   0.182 hours
Unit interval =   5.000 minutes
Unit interval percentage of lag time = 45.6871
Hydrograph baseflow =     0.00(CFS)
Average maximum watershed loss rate(Fm) =  0.290(In/Hr)
Average low loss rate fraction (Yb) = 0.162 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall =  0.712(In)
Computed peak 30-minute rainfall =  1.218(In)
Specified peak 1-hour rainfall =  1.500(In)
Computed peak 3-hour rainfall =  2.942(In)
Specified peak 6-hour rainfall =  4.500(In)
Specified peak 24-hour rainfall = 12.000(In)


Rainfall depth area reduction factors:
Using a total area of      25.42(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999     Adjusted rainfall =  0.711(In)
30-minute factor = 0.999    Adjusted rainfall =  1.217(In)
1-hour factor = 0.999       Adjusted rainfall =  1.498(In)
3-hour factor = 1.000       Adjusted rainfall =  2.942(In)
6-hour factor = 1.000       Adjusted rainfall =  4.500(In)
24-hour factor = 1.000      Adjusted rainfall = 12.000(In)
--------------------------------------------------------------------------

                      U n i t  H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Interval          'S' Graph          Unit Hydrograph
Number            Mean values             ((CFS))
--------------------------------------------------------------------------
               (K =       307.42 (CFS))

  1                3.770                  11.590
  2               19.507                  48.379
  3               57.188                 115.840
  4               74.099                  51.988
  5               83.072                  27.584
  6               89.001                  18.226
  7               93.088                  12.567
  8               95.822                   8.402
  9               97.540                   5.282
 10               98.307                   2.360
 11               98.797                   1.505
 12               99.152                   1.093
 13               99.469                   0.973
 14               99.765                   0.912
 15               99.923                   0.483
 16              100.000                   0.238
--------------------------------------------------------------------------
Peak Unit   Adjusted mass rainfall  Unit rainfall
Number              (In)                (In)
  1              0.7109              0.7109
  2              0.8752              0.1643
  3              0.9885              0.1132
  4              1.0775              0.0891
  5              1.1522              0.0746
  6              1.2169              0.0648
  7              1.2745              0.0576
  8              1.3266              0.0521
  9              1.3743              0.0477
 10              1.4185              0.0441
```

11	1.4596	0.0411
12	1.4982	0.0386
13	1.5737	0.0755
14	1.6470	0.0733
15	1.7182	0.0713
16	1.7877	0.0695
17	1.8555	0.0678
18	1.9218	0.0663
19	1.9867	0.0649
20	2.0503	0.0636
21	2.1126	0.0624
22	2.1738	0.0612
23	2.2340	0.0602
24	2.2932	0.0592
25	2.3514	0.0582
26	2.4087	0.0573
27	2.4652	0.0565
28	2.5208	0.0557
29	2.5758	0.0549
30	2.6299	0.0542
31	2.6834	0.0535
32	2.7363	0.0528
33	2.7885	0.0522
34	2.8401	0.0516
35	2.8911	0.0510
36	2.9415	0.0504
37	2.9914	0.0498
38	3.0407	0.0493
39	3.0895	0.0488
40	3.1378	0.0483
41	3.1857	0.0479
42	3.2332	0.0474
43	3.2801	0.0470
44	3.3267	0.0466
45	3.3729	0.0462
46	3.4187	0.0458
47	3.4640	0.0454
48	3.5091	0.0450
49	3.5537	0.0447
50	3.5980	0.0443
51	3.6420	0.0440
52	3.6856	0.0436
53	3.7289	0.0433
54	3.7719	0.0430
55	3.8146	0.0427
56	3.8570	0.0424
57	3.8991	0.0421
58	3.9409	0.0418
59	3.9824	0.0415
60	4.0236	0.0413
61	4.0646	0.0410
62	4.1054	0.0407
63	4.1459	0.0405
64	4.1861	0.0402
65	4.2261	0.0400
66	4.2658	0.0398
67	4.3054	0.0395
68	4.3447	0.0393
69	4.3837	0.0391
70	4.4226	0.0389
71	4.4612	0.0386
72	4.4996	0.0384
73	4.5438	0.0441
74	4.5877	0.0440
75	4.6315	0.0438
76	4.6751	0.0436
77	4.7186	0.0434
78	4.7618	0.0433
79	4.8049	0.0431
80	4.8479	0.0430
81	4.8907	0.0428

82	4.9333	0.0426
83	4.9758	0.0425
84	5.0182	0.0423
85	5.0604	0.0422
86	5.1024	0.0421
87	5.1443	0.0419
88	5.1861	0.0418
89	5.2277	0.0416
90	5.2692	0.0415
91	5.3106	0.0414
92	5.3518	0.0412
93	5.3929	0.0411
94	5.4339	0.0410
95	5.4747	0.0408
96	5.5154	0.0407
97	5.5560	0.0406
98	5.5965	0.0405
99	5.6368	0.0403
100	5.6771	0.0402
101	5.7172	0.0401
102	5.7572	0.0400
103	5.7970	0.0399
104	5.8368	0.0398
105	5.8765	0.0397
106	5.9160	0.0395
107	5.9554	0.0394
108	5.9948	0.0393
109	6.0340	0.0392
110	6.0731	0.0391
111	6.1121	0.0390
112	6.1510	0.0389
113	6.1898	0.0388
114	6.2285	0.0387
115	6.2671	0.0386
116	6.3057	0.0385
117	6.3441	0.0384
118	6.3824	0.0383
119	6.4206	0.0382
120	6.4587	0.0381
121	6.4968	0.0380
122	6.5347	0.0379
123	6.5726	0.0379
124	6.6103	0.0378
125	6.6480	0.0377
126	6.6856	0.0376
127	6.7231	0.0375
128	6.7605	0.0374
129	6.7978	0.0373
130	6.8351	0.0372
131	6.8722	0.0372
132	6.9093	0.0371
133	6.9463	0.0370
134	6.9832	0.0369
135	7.0201	0.0368
136	7.0568	0.0368
137	7.0935	0.0367
138	7.1301	0.0366
139	7.1666	0.0365
140	7.2030	0.0364
141	7.2394	0.0364
142	7.2757	0.0363
143	7.3119	0.0362
144	7.3481	0.0361
145	7.3841	0.0361
146	7.4201	0.0360
147	7.4560	0.0359
148	7.4919	0.0359
149	7.5277	0.0358
150	7.5634	0.0357
151	7.5990	0.0356
152	7.6346	0.0356

153	7.6701	0.0355
154	7.7056	0.0354
155	7.7409	0.0354
156	7.7762	0.0353
157	7.8115	0.0352
158	7.8466	0.0352
159	7.8817	0.0351
160	7.9168	0.0350
161	7.9518	0.0350
162	7.9867	0.0349
163	8.0215	0.0349
164	8.0563	0.0348
165	8.0910	0.0347
166	8.1257	0.0347
167	8.1603	0.0346
168	8.1949	0.0345
169	8.2293	0.0345
170	8.2638	0.0344
171	8.2981	0.0344
172	8.3324	0.0343
173	8.3667	0.0342
174	8.4009	0.0342
175	8.4350	0.0341
176	8.4691	0.0341
177	8.5031	0.0340
178	8.5371	0.0340
179	8.5710	0.0339
180	8.6048	0.0339
181	8.6386	0.0338
182	8.6724	0.0337
183	8.7060	0.0337
184	8.7397	0.0336
185	8.7733	0.0336
186	8.8068	0.0335
187	8.8403	0.0335
188	8.8737	0.0334
189	8.9071	0.0334
190	8.9404	0.0333
191	8.9736	0.0333
192	9.0069	0.0332
193	9.0400	0.0332
194	9.0731	0.0331
195	9.1062	0.0331
196	9.1392	0.0330
197	9.1722	0.0330
198	9.2051	0.0329
199	9.2380	0.0329
200	9.2708	0.0328
201	9.3036	0.0328
202	9.3363	0.0327
203	9.3690	0.0327
204	9.4016	0.0326
205	9.4342	0.0326
206	9.4667	0.0325
207	9.4992	0.0325
208	9.5317	0.0324
209	9.5641	0.0324
210	9.5964	0.0324
211	9.6288	0.0323
212	9.6610	0.0323
213	9.6932	0.0322
214	9.7254	0.0322
215	9.7575	0.0321
216	9.7896	0.0321
217	9.8217	0.0320
218	9.8537	0.0320
219	9.8856	0.0320
220	9.9176	0.0319
221	9.9494	0.0319
222	9.9813	0.0318
223	10.0131	0.0318

224	10.0448	0.0317
225	10.0765	0.0317
226	10.1082	0.0317
227	10.1398	0.0316
228	10.1714	0.0316
229	10.2029	0.0315
230	10.2345	0.0315
231	10.2659	0.0315
232	10.2973	0.0314
233	10.3287	0.0314
234	10.3601	0.0313
235	10.3914	0.0313
236	10.4226	0.0313
237	10.4539	0.0312
238	10.4851	0.0312
239	10.5162	0.0312
240	10.5473	0.0311
241	10.5784	0.0311
242	10.6094	0.0310
243	10.6404	0.0310
244	10.6714	0.0310
245	10.7023	0.0309
246	10.7332	0.0309
247	10.7641	0.0309
248	10.7949	0.0308
249	10.8257	0.0308
250	10.8564	0.0307
251	10.8871	0.0307
252	10.9178	0.0307
253	10.9484	0.0306
254	10.9790	0.0306
255	11.0096	0.0306
256	11.0401	0.0305
257	11.0706	0.0305
258	11.1011	0.0305
259	11.1315	0.0304
260	11.1619	0.0304
261	11.1923	0.0304
262	11.2226	0.0303
263	11.2529	0.0303
264	11.2831	0.0303
265	11.3134	0.0302
266	11.3436	0.0302
267	11.3737	0.0302
268	11.4038	0.0301
269	11.4339	0.0301
270	11.4640	0.0301
271	11.4940	0.0300
272	11.5240	0.0300
273	11.5540	0.0300
274	11.5839	0.0299
275	11.6138	0.0299
276	11.6437	0.0299
277	11.6735	0.0298
278	11.7033	0.0298
279	11.7331	0.0298
280	11.7628	0.0297
281	11.7925	0.0297
282	11.8222	0.0297
283	11.8518	0.0296
284	11.8815	0.0296
285	11.9110	0.0296
286	11.9406	0.0296
287	11.9701	0.0295
288	11.9996	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0048	0.0247

2	0.0295	0.0048	0.0248
3	0.0296	0.0048	0.0248
4	0.0296	0.0048	0.0248
5	0.0297	0.0048	0.0249
6	0.0297	0.0048	0.0249
7	0.0298	0.0048	0.0250
8	0.0298	0.0048	0.0250
9	0.0299	0.0048	0.0250
10	0.0299	0.0048	0.0251
11	0.0300	0.0048	0.0251
12	0.0300	0.0048	0.0251
13	0.0301	0.0049	0.0252
14	0.0301	0.0049	0.0252
15	0.0302	0.0049	0.0253
16	0.0302	0.0049	0.0253
17	0.0303	0.0049	0.0254
18	0.0303	0.0049	0.0254
19	0.0304	0.0049	0.0255
20	0.0304	0.0049	0.0255
21	0.0305	0.0049	0.0255
22	0.0305	0.0049	0.0256
23	0.0306	0.0049	0.0256
24	0.0306	0.0049	0.0257
25	0.0307	0.0050	0.0257
26	0.0307	0.0050	0.0257
27	0.0308	0.0050	0.0258
28	0.0308	0.0050	0.0258
29	0.0309	0.0050	0.0259
30	0.0309	0.0050	0.0259
31	0.0310	0.0050	0.0260
32	0.0310	0.0050	0.0260
33	0.0311	0.0050	0.0261
34	0.0312	0.0050	0.0261
35	0.0312	0.0050	0.0262
36	0.0313	0.0051	0.0262
37	0.0313	0.0051	0.0263
38	0.0314	0.0051	0.0263
39	0.0315	0.0051	0.0264
40	0.0315	0.0051	0.0264
41	0.0316	0.0051	0.0265
42	0.0316	0.0051	0.0265
43	0.0317	0.0051	0.0266
44	0.0317	0.0051	0.0266
45	0.0318	0.0051	0.0267
46	0.0319	0.0051	0.0267
47	0.0320	0.0052	0.0268
48	0.0320	0.0052	0.0268
49	0.0321	0.0052	0.0269
50	0.0321	0.0052	0.0269
51	0.0322	0.0052	0.0270
52	0.0323	0.0052	0.0271
53	0.0324	0.0052	0.0271
54	0.0324	0.0052	0.0272
55	0.0325	0.0052	0.0272
56	0.0325	0.0053	0.0273
57	0.0326	0.0053	0.0274
58	0.0327	0.0053	0.0274
59	0.0328	0.0053	0.0275
60	0.0328	0.0053	0.0275
61	0.0329	0.0053	0.0276
62	0.0330	0.0053	0.0276
63	0.0331	0.0053	0.0277
64	0.0331	0.0053	0.0278
65	0.0332	0.0054	0.0279
66	0.0333	0.0054	0.0279
67	0.0334	0.0054	0.0280
68	0.0334	0.0054	0.0280
69	0.0335	0.0054	0.0281
70	0.0336	0.0054	0.0282
71	0.0337	0.0054	0.0282
72	0.0337	0.0054	0.0283

73	0.0339	0.0055	0.0284
74	0.0339	0.0055	0.0284
75	0.0340	0.0055	0.0285
76	0.0341	0.0055	0.0286
77	0.0342	0.0055	0.0287
78	0.0342	0.0055	0.0287
79	0.0344	0.0056	0.0288
80	0.0344	0.0056	0.0289
81	0.0345	0.0056	0.0290
82	0.0346	0.0056	0.0290
83	0.0347	0.0056	0.0291
84	0.0348	0.0056	0.0292
85	0.0349	0.0056	0.0293
86	0.0350	0.0056	0.0293
87	0.0351	0.0057	0.0294
88	0.0352	0.0057	0.0295
89	0.0353	0.0057	0.0296
90	0.0354	0.0057	0.0297
91	0.0355	0.0057	0.0298
92	0.0356	0.0057	0.0298
93	0.0357	0.0058	0.0299
94	0.0358	0.0058	0.0300
95	0.0359	0.0058	0.0301
96	0.0360	0.0058	0.0302
97	0.0361	0.0058	0.0303
98	0.0362	0.0058	0.0304
99	0.0364	0.0059	0.0305
100	0.0364	0.0059	0.0306
101	0.0366	0.0059	0.0307
102	0.0367	0.0059	0.0308
103	0.0368	0.0059	0.0309
104	0.0369	0.0060	0.0310
105	0.0371	0.0060	0.0311
106	0.0372	0.0060	0.0312
107	0.0373	0.0060	0.0313
108	0.0374	0.0060	0.0314
109	0.0376	0.0061	0.0315
110	0.0377	0.0061	0.0316
111	0.0379	0.0061	0.0317
112	0.0379	0.0061	0.0318
113	0.0381	0.0062	0.0320
114	0.0382	0.0062	0.0320
115	0.0384	0.0062	0.0322
116	0.0385	0.0062	0.0323
117	0.0387	0.0063	0.0325
118	0.0388	0.0063	0.0325
119	0.0390	0.0063	0.0327
120	0.0391	0.0063	0.0328
121	0.0393	0.0064	0.0330
122	0.0394	0.0064	0.0331
123	0.0397	0.0064	0.0332
124	0.0398	0.0064	0.0333
125	0.0400	0.0065	0.0335
126	0.0401	0.0065	0.0336
127	0.0403	0.0065	0.0338
128	0.0405	0.0065	0.0339
129	0.0407	0.0066	0.0341
130	0.0408	0.0066	0.0342
131	0.0411	0.0066	0.0345
132	0.0412	0.0067	0.0346
133	0.0415	0.0067	0.0348
134	0.0416	0.0067	0.0349
135	0.0419	0.0068	0.0351
136	0.0421	0.0068	0.0353
137	0.0423	0.0068	0.0355
138	0.0425	0.0069	0.0356
139	0.0428	0.0069	0.0359
140	0.0430	0.0069	0.0360
141	0.0433	0.0070	0.0363
142	0.0434	0.0070	0.0364
143	0.0438	0.0071	0.0367

144	0.0440	0.0071	0.0369
145	0.0384	0.0062	0.0322
146	0.0386	0.0062	0.0324
147	0.0391	0.0063	0.0328
148	0.0393	0.0063	0.0329
149	0.0398	0.0064	0.0333
150	0.0400	0.0065	0.0335
151	0.0405	0.0065	0.0339
152	0.0407	0.0066	0.0342
153	0.0413	0.0067	0.0346
154	0.0415	0.0067	0.0348
155	0.0421	0.0068	0.0353
156	0.0424	0.0068	0.0355
157	0.0430	0.0069	0.0360
158	0.0433	0.0070	0.0363
159	0.0440	0.0071	0.0369
160	0.0443	0.0072	0.0371
161	0.0450	0.0073	0.0377
162	0.0454	0.0073	0.0381
163	0.0462	0.0075	0.0387
164	0.0466	0.0075	0.0391
165	0.0474	0.0077	0.0398
166	0.0479	0.0077	0.0401
167	0.0488	0.0079	0.0409
168	0.0493	0.0080	0.0414
169	0.0504	0.0081	0.0423
170	0.0510	0.0082	0.0428
171	0.0522	0.0084	0.0438
172	0.0528	0.0085	0.0443
173	0.0542	0.0088	0.0454
174	0.0549	0.0089	0.0460
175	0.0565	0.0091	0.0474
176	0.0573	0.0093	0.0481
177	0.0592	0.0096	0.0496
178	0.0602	0.0097	0.0504
179	0.0624	0.0101	0.0523
180	0.0636	0.0103	0.0533
181	0.0663	0.0107	0.0556
182	0.0678	0.0110	0.0569
183	0.0713	0.0115	0.0598
184	0.0733	0.0118	0.0614
185	0.0386	0.0062	0.0324
186	0.0411	0.0066	0.0345
187	0.0477	0.0077	0.0400
188	0.0521	0.0084	0.0437
189	0.0648	0.0105	0.0543
190	0.0746	0.0120	0.0626
191	0.1132	0.0183	0.0949
192	0.1643	0.0242	0.1402
193	0.7109	0.0242	0.6868
194	0.0891	0.0144	0.0747
195	0.0576	0.0093	0.0483
196	0.0441	0.0071	0.0370
197	0.0755	0.0122	0.0633
198	0.0695	0.0112	0.0582
199	0.0649	0.0105	0.0544
200	0.0612	0.0099	0.0513
201	0.0582	0.0094	0.0488
202	0.0557	0.0090	0.0467
203	0.0535	0.0086	0.0449
204	0.0516	0.0083	0.0433
205	0.0498	0.0081	0.0418
206	0.0483	0.0078	0.0405
207	0.0470	0.0076	0.0394
208	0.0458	0.0074	0.0384
209	0.0447	0.0072	0.0374
210	0.0436	0.0070	0.0366
211	0.0427	0.0069	0.0358
212	0.0418	0.0068	0.0351
213	0.0410	0.0066	0.0344
214	0.0402	0.0065	0.0337

215	0.0395	0.0064	0.0331
216	0.0389	0.0063	0.0326
217	0.0441	0.0071	0.0370
218	0.0436	0.0070	0.0366
219	0.0431	0.0070	0.0362
220	0.0426	0.0069	0.0358
221	0.0422	0.0068	0.0354
222	0.0418	0.0067	0.0350
223	0.0414	0.0067	0.0347
224	0.0410	0.0066	0.0343
225	0.0406	0.0066	0.0340
226	0.0402	0.0065	0.0337
227	0.0399	0.0064	0.0334
228	0.0395	0.0064	0.0332
229	0.0392	0.0063	0.0329
230	0.0389	0.0063	0.0326
231	0.0386	0.0062	0.0324
232	0.0383	0.0062	0.0321
233	0.0380	0.0061	0.0319
234	0.0378	0.0061	0.0317
235	0.0375	0.0061	0.0314
236	0.0372	0.0060	0.0312
237	0.0370	0.0060	0.0310
238	0.0368	0.0059	0.0308
239	0.0365	0.0059	0.0306
240	0.0363	0.0059	0.0304
241	0.0361	0.0058	0.0302
242	0.0359	0.0058	0.0301
243	0.0356	0.0058	0.0299
244	0.0354	0.0057	0.0297
245	0.0352	0.0057	0.0295
246	0.0350	0.0057	0.0294
247	0.0349	0.0056	0.0292
248	0.0347	0.0056	0.0291
249	0.0345	0.0056	0.0289
250	0.0343	0.0055	0.0288
251	0.0341	0.0055	0.0286
252	0.0340	0.0055	0.0285
253	0.0338	0.0055	0.0283
254	0.0336	0.0054	0.0282
255	0.0335	0.0054	0.0281
256	0.0333	0.0054	0.0279
257	0.0332	0.0054	0.0278
258	0.0330	0.0053	0.0277
259	0.0329	0.0053	0.0276
260	0.0327	0.0053	0.0274
261	0.0326	0.0053	0.0273
262	0.0324	0.0052	0.0272
263	0.0323	0.0052	0.0271
264	0.0322	0.0052	0.0270
265	0.0320	0.0052	0.0269
266	0.0319	0.0052	0.0268
267	0.0318	0.0051	0.0267
268	0.0317	0.0051	0.0266
269	0.0315	0.0051	0.0264
270	0.0314	0.0051	0.0263
271	0.0313	0.0051	0.0263
272	0.0312	0.0050	0.0262
273	0.0311	0.0050	0.0261
274	0.0310	0.0050	0.0260
275	0.0309	0.0050	0.0259
276	0.0307	0.0050	0.0258
277	0.0306	0.0049	0.0257
278	0.0305	0.0049	0.0256
279	0.0304	0.0049	0.0255
280	0.0303	0.0049	0.0254
281	0.0302	0.0049	0.0253
282	0.0301	0.0049	0.0253
283	0.0300	0.0048	0.0252
284	0.0299	0.0048	0.0251
285	0.0298	0.0048	0.0250

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      286              0.0297           0.0048              0.0249
      287              0.0296           0.0048              0.0249
      288              0.0296           0.0048              0.0248
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      1.85(In)
      Total effective rainfall =     10.15(In)
      Peak flow rate in flood hydrograph =     96.38(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       25.0      50.0      75.0     100.0
----------------------------------------------------------------------------
  0+ 5       0.0020      0.29  Q         |         |         |         |
  0+10       0.0122      1.48  Q         |         |         |         |
  0+15       0.0422      4.35  VQ        |         |         |         |
  0+20       0.0810      5.64  V Q       |         |         |         |
  0+25       0.1246      6.33  V Q       |         |         |         |
  0+30       0.1714      6.79  V Q       |         |         |         |
  0+35       0.2204      7.11  V Q       |         |         |         |
  0+40       0.2709      7.33  V Q       |         |         |         |
  0+45       0.3224      7.48  V Q       |         |         |         |
  0+50       0.3743      7.54  V  Q      |         |         |         |
  0+55       0.4266      7.59  V  Q      |         |         |         |
  1+ 0       0.4792      7.63  V  Q      |         |         |         |
  1+ 5       0.5320      7.67  V  Q      |         |         |         |
  1+10       0.5851      7.70  |V Q       |         |         |         |
  1+15       0.6383      7.73  |V Q       |         |         |         |
  1+20       0.6917      7.75  |V Q       |         |         |         |
  1+25       0.7451      7.76  |V Q       |         |         |         |
  1+30       0.7987      7.77  |V Q       |         |         |         |
  1+35       0.8523      7.79  |V Q       |         |         |         |
  1+40       0.9060      7.80  |V Q       |         |         |         |
  1+45       0.9598      7.81  |V Q       |         |         |         |
  1+50       1.0137      7.82  |V Q       |         |         |         |
  1+55       1.0677      7.84  |V Q       |         |         |         |
  2+ 0       1.1217      7.85  | VQ       |         |         |         |
  2+ 5       1.1759      7.86  | VQ       |         |         |         |
  2+10       1.2301      7.88  | VQ       |         |         |         |
  2+15       1.2845      7.89  | VQ       |         |         |         |
  2+20       1.3389      7.91  | VQ       |         |         |         |
  2+25       1.3935      7.92  | VQ       |         |         |         |
  2+30       1.4481      7.93  | VQ       |         |         |         |
  2+35       1.5029      7.95  | VQ       |         |         |         |
  2+40       1.5577      7.96  | VQ       |         |         |         |
  2+45       1.6126      7.98  |  Q       |         |         |         |
  2+50       1.6676      7.99  |  Q       |         |         |         |
  2+55       1.7228      8.01  |  Q       |         |         |         |
  3+ 0       1.7780      8.02  |  Q       |         |         |         |
  3+ 5       1.8333      8.03  |  Q       |         |         |         |
  3+10       1.8888      8.05  |  Q       |         |         |         |
  3+15       1.9443      8.06  |  Q       |         |         |         |
  3+20       1.9999      8.08  |  Q       |         |         |         |
  3+25       2.0557      8.09  |  Q       |         |         |         |
  3+30       2.1115      8.11  |  Q       |         |         |         |
  3+35       2.1675      8.13  |  QV      |         |         |         |
  3+40       2.2236      8.14  |  QV      |         |         |         |
  3+45       2.2797      8.16  |  QV      |         |         |         |
  3+50       2.3360      8.17  |  QV      |         |         |         |
  3+55       2.3924      8.19  |  QV      |         |         |         |
  4+ 0       2.4489      8.20  |  QV      |         |         |         |
  4+ 5       2.5055      8.22  |  QV      |         |         |         |
  4+10       2.5623      8.24  |  QV      |         |         |         |
  4+15       2.6191      8.25  |  QV      |         |         |         |
  4+20       2.6761      8.27  |  QV      |         |         |         |
  4+25       2.7332      8.29  |  Q V     |         |         |         |
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 4+30      2.7904     8.30  |  Q V    |         |         |         |
 4+35      2.8477     8.32  |  Q V    |         |         |         |
 4+40      2.9051     8.34  |  Q V    |         |         |         |
 4+45      2.9627     8.36  |  Q V    |         |         |         |
 4+50      3.0203     8.37  |  Q V    |         |         |         |
 4+55      3.0781     8.39  |  Q V    |         |         |         |
 5+ 0      3.1361     8.41  |  Q V    |         |         |         |
 5+ 5      3.1941     8.43  |  Q V    |         |         |         |
 5+10      3.2523     8.45  |  Q  V   |         |         |         |
 5+15      3.3106     8.47  |  Q  V   |         |         |         |
 5+20      3.3690     8.48  |  Q  V   |         |         |         |
 5+25      3.4276     8.50  |  Q  V   |         |         |         |
 5+30      3.4863     8.52  |  Q  V   |         |         |         |
 5+35      3.5451     8.54  |  Q  V   |         |         |         |
 5+40      3.6041     8.56  |  Q  V   |         |         |         |
 5+45      3.6632     8.58  |  Q  V   |         |         |         |
 5+50      3.7224     8.60  |  Q  V   |         |         |         |
 5+55      3.7818     8.62  |  Q   V  |         |         |         |
 6+ 0      3.8413     8.64  |  Q   V  |         |         |         |
 6+ 5      3.9009     8.66  |  Q   V  |         |         |         |
 6+10      3.9607     8.68  |  Q   V  |         |         |         |
 6+15      4.0207     8.70  |  Q   V  |         |         |         |
 6+20      4.0808     8.72  |  Q   V  |         |         |         |
 6+25      4.1410     8.75  |  Q   V  |         |         |         |
 6+30      4.2014     8.77  |  Q   V  |         |         |         |
 6+35      4.2619     8.79  |  Q   V  |         |         |         |
 6+40      4.3226     8.81  |  Q    V |         |         |         |
 6+45      4.3835     8.83  |  Q    V |         |         |         |
 6+50      4.4444     8.86  |  Q    V |         |         |         |
 6+55      4.5056     8.88  |  Q    V |         |         |         |
 7+ 0      4.5669     8.90  |  Q    V |         |         |         |
 7+ 5      4.6284     8.93  |  Q    V |         |         |         |
 7+10      4.6900     8.95  |  Q    V |         |         |         |
 7+15      4.7518     8.97  |  Q    V |         |         |         |
 7+20      4.8138     9.00  |  Q    V |         |         |         |
 7+25      4.8760     9.02  |  Q     V|         |         |         |
 7+30      4.9383     9.05  |  Q     V|         |         |         |
 7+35      5.0008     9.07  |  Q     V|         |         |         |
 7+40      5.0634     9.10  |  Q     V|         |         |         |
 7+45      5.1263     9.13  |  Q     V|         |         |         |
 7+50      5.1893     9.15  |  Q     V|         |         |         |
 7+55      5.2525     9.18  |  Q     V|         |         |         |
 8+ 0      5.3159     9.20  |  Q     V|         |         |         |
 8+ 5      5.3795     9.23  |  Q      V         |         |         |
 8+10      5.4432     9.26  |  Q      V         |         |         |
 8+15      5.5072     9.29  |  Q      V         |         |         |
 8+20      5.5713     9.31  |  Q      V         |         |         |
 8+25      5.6357     9.34  |  Q      V         |         |         |
 8+30      5.7002     9.37  |  Q      V         |         |         |
 8+35      5.7650     9.40  |  Q      V         |         |         |
 8+40      5.8299     9.43  |  Q      V         |         |         |
 8+45      5.8951     9.46  |  Q      V         |         |         |
 8+50      5.9605     9.49  |  Q       |V       |         |         |
 8+55      6.0261     9.52  |  Q       |V       |         |         |
 9+ 0      6.0919     9.55  |  Q       |V       |         |         |
 9+ 5      6.1579     9.59  |  Q       |V       |         |         |
 9+10      6.2242     9.62  |  Q       |V       |         |         |
 9+15      6.2907     9.65  |  Q       |V       |         |         |
 9+20      6.3574     9.69  |  Q       |V       |         |         |
 9+25      6.4243     9.72  |  Q       |V       |         |         |
 9+30      6.4915     9.76  |  Q       | V      |         |         |
 9+35      6.5589     9.79  |  Q       | V      |         |         |
 9+40      6.6266     9.83  |  Q       | V      |         |         |
 9+45      6.6946     9.86  |  Q       | V      |         |         |
 9+50      6.7627     9.90  |  Q       | V      |         |         |
 9+55      6.8312     9.94  |  Q       | V      |         |         |
10+ 0      6.8999     9.98  |  Q       | V      |         |         |
10+ 5      6.9689    10.02  |   Q      | V      |         |         |
10+10      7.0381    10.05  |   Q      |  V     |         |         |
10+15      7.1076    10.10  |   Q      |  V     |         |         |
10+20      7.1774    10.13  |   Q      |  V     |         |         |
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10+25       7.2475     10.18  |   Q     |  V      |         |         |
10+30       7.3179     10.22  |   Q     |  V      |         |         |
10+35       7.3886     10.26  |   Q     |  V      |         |         |
10+40       7.4596     10.31  |   Q     |  V      |         |         |
10+45       7.5309     10.35  |   Q     |   V     |         |         |
10+50       7.6025     10.40  |   Q     |   V     |         |         |
10+55       7.6744     10.45  |   Q     |   V     |         |         |
11+ 0       7.7467     10.49  |   Q     |   V     |         |         |
11+ 5       7.8193     10.54  |   Q     |   V     |         |         |
11+10       7.8922     10.59  |   Q     |   V     |         |         |
11+15       7.9655     10.64  |   Q     |   V     |         |         |
11+20       8.0392     10.69  |   Q     |   V     |         |         |
11+25       8.1132     10.75  |   Q     |    V    |         |         |
11+30       8.1876     10.80  |   Q     |    V    |         |         |
11+35       8.2623     10.86  |   Q     |    V    |         |         |
11+40       8.3375     10.91  |   Q     |    V    |         |         |
11+45       8.4131     10.97  |   Q     |    V    |         |         |
11+50       8.4890     11.03  |   Q     |    V    |         |         |
11+55       8.5654     11.09  |   Q     |    V    |         |         |
12+ 0       8.6422     11.15  |   Q     |     V   |         |         |
12+ 5       8.7191     11.16  |   Q     |     V   |         |         |
12+10       8.7948     10.99  |   Q     |     V   |         |         |
12+15       8.8670     10.49  |   Q     |     V   |         |         |
12+20       8.9379     10.30  |   Q     |     V   |         |         |
12+25       9.0085     10.25  |   Q     |     V   |         |         |
12+30       9.0790     10.24  |   Q     |     V   |         |         |
12+35       9.1497     10.27  |   Q     |      V  |         |         |
12+40       9.2207     10.31  |   Q     |      V  |         |         |
12+45       9.2922     10.38  |   Q     |      V  |         |         |
12+50       9.3642     10.46  |   Q     |      V  |         |         |
12+55       9.4369     10.55  |   Q     |      V  |         |         |
13+ 0       9.5102     10.64  |   Q     |      V  |         |         |
13+ 5       9.5843     10.75  |   Q     |      V  |         |         |
13+10       9.6590     10.85  |   Q     |      V  |         |         |
13+15       9.7345     10.97  |   Q     |       V |         |         |
13+20       9.8108     11.08  |   Q     |       V |         |         |
13+25       9.8880     11.21  |   Q     |       V |         |         |
13+30       9.9660     11.33  |   Q     |       V |         |         |
13+35      10.0450     11.47  |   Q     |       V |         |         |
13+40      10.1249     11.60  |   Q     |       V |         |         |
13+45      10.2059     11.75  |   Q     |       V |         |         |
13+50      10.2878     11.90  |   Q     |        V|         |         |
13+55      10.3709     12.07  |   Q     |        V|         |         |
14+ 0      10.4551     12.22  |   Q     |        V|         |         |
14+ 5      10.5406     12.41  |   Q     |        V|         |         |
14+10      10.6273     12.59  |    Q    |        V|         |         |
14+15      10.7154     12.80  |    Q    |        V|         |         |
14+20      10.8050     13.00  |    Q    |         V         |         |
14+25      10.8961     13.23  |    Q    |         V         |         |
14+30      10.9888     13.46  |    Q    |         V         |         |
14+35      11.0833     13.72  |    Q    |         V         |         |
14+40      11.1796     13.98  |    Q    |         V         |         |
14+45      11.2779     14.28  |    Q    |         V         |         |
14+50      11.3783     14.57  |    Q    |         |V        |         |
14+55      11.4811     14.93  |    Q    |         |V        |         |
15+ 0      11.5863     15.27  |     Q   |         |V        |         |
15+ 5      11.6943     15.69  |     Q   |         |V        |         |
15+10      11.8053     16.11  |     Q   |         |V        |         |
15+15      11.9198     16.63  |     Q   |         | V       |         |
15+20      12.0380     17.15  |     Q   |         | V       |         |
15+25      12.1580     17.43  |     Q   |         | V       |         |
15+30      12.2717     16.51  |     Q   |         | V       |         |
15+35      12.3650     13.55  |    Q    |         |  V      |         |
15+40      12.4527     12.74  |    Q    |         |  V      |         |
15+45      12.5429     13.09  |    Q    |         |  V      |         |
15+50      12.6394     14.01  |    Q    |         |  V      |         |
15+55      12.7500     16.07  |     Q   |         |  V      |         |
16+ 0      12.8855     19.67  |      Q  |         |  V      |         |
16+ 5      13.1106     32.68  |         |  Q      |   V     |         |
16+10      13.5199     59.42  |         |         |  Q V    |         |
16+15      14.1836     96.38  |         |         |     V   |       Q |
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16+20      14.5592     54.53  |          |          |Q     V  |          |
16+25      14.8060     35.84  |          |    Q     |      V  |          |
16+30      15.0012     28.35  |          |Q         |      V  |          |
16+35      15.1809     26.08  |          Q          |       V |          |
16+40      15.3399     23.10  |         Q|          |       V |          |
16+45      15.4799     20.32  |        Q |          |       V |          |
16+50      15.6023     17.78  |       Q  |          |        V|          |
16+55      15.7165     16.57  |     Q    |          |        V|          |
17+ 0      15.8248     15.73  |     Q    |          |        V|          |
17+ 5      15.9287     15.09  |     Q    |          |        V|          |
17+10      16.0284     14.47  |    Q     |          |        V|          |
17+15      16.1226     13.68  |    Q     |          |        V|          |
17+20      16.2125     13.06  |    Q     |          |         V          |
17+25      16.2988     12.52  |    Q     |          |         V          |
17+30      16.3826     12.17  |   Q      |          |         V          |
17+35      16.4642     11.85  |   Q      |          |         V          |
17+40      16.5438     11.56  |   Q      |          |         V          |
17+45      16.6216     11.29  |   Q      |          |         V          |
17+50      16.6976     11.03  |   Q      |          |          |V        |
17+55      16.7720     10.80  |   Q      |          |          |V        |
18+ 0      16.8449     10.59  |   Q      |          |          |V        |
18+ 5      16.9168     10.45  |   Q      |          |          |V        |
18+10      16.9892     10.50  |   Q      |          |          |V        |
18+15      17.0642     10.90  |   Q      |          |          |V        |
18+20      17.1401     11.01  |   Q      |          |          |V        |
18+25      17.2158     11.00  |   Q      |          |          | V       |
18+30      17.2913     10.96  |   Q      |          |          | V       |
18+35      17.3663     10.90  |   Q      |          |          | V       |
18+40      17.4409     10.82  |   Q      |          |          | V       |
18+45      17.5148     10.73  |   Q      |          |          | V       |
18+50      17.5880     10.64  |   Q      |          |          | V       |
18+55      17.6607     10.54  |   Q      |          |          | V       |
19+ 0      17.7326     10.45  |   Q      |          |          | V       |
19+ 5      17.8040     10.36  |   Q      |          |          |  V      |
19+10      17.8748     10.28  |   Q      |          |          |  V      |
19+15      17.9450     10.19  |   Q      |          |          |  V      |
19+20      18.0146     10.11  |   Q      |          |          |  V      |
19+25      18.0837     10.03  |   Q      |          |          |  V      |
19+30      18.1522      9.95  |  Q       |          |          |  V      |
19+35      18.2203      9.88  |  Q       |          |          |  V      |
19+40      18.2878      9.80  |  Q       |          |          |   V     |
19+45      18.3548      9.73  |  Q       |          |          |   V     |
19+50      18.4214      9.67  |  Q       |          |          |   V     |
19+55      18.4875      9.60  |  Q       |          |          |   V     |
20+ 0      18.5532      9.54  |  Q       |          |          |   V     |
20+ 5      18.6184      9.47  |  Q       |          |          |   V     |
20+10      18.6832      9.41  |  Q       |          |          |   V     |
20+15      18.7476      9.35  |  Q       |          |          |   V     |
20+20      18.8117      9.30  |  Q       |          |          |   V     |
20+25      18.8753      9.24  |  Q       |          |          |    V    |
20+30      18.9386      9.19  |  Q       |          |          |    V    |
20+35      19.0015      9.13  |  Q       |          |          |    V    |
20+40      19.0640      9.08  |  Q       |          |          |    V    |
20+45      19.1262      9.03  |  Q       |          |          |    V    |
20+50      19.1881      8.98  |  Q       |          |          |    V    |
20+55      19.2496      8.93  |  Q       |          |          |    V    |
21+ 0      19.3108      8.89  |  Q       |          |          |    V    |
21+ 5      19.3717      8.84  |  Q       |          |          |     V   |
21+10      19.4323      8.80  |  Q       |          |          |     V   |
21+15      19.4926      8.75  |  Q       |          |          |     V   |
21+20      19.5526      8.71  |  Q       |          |          |     V   |
21+25      19.6123      8.67  |  Q       |          |          |     V   |
21+30      19.6717      8.63  |  Q       |          |          |     V   |
21+35      19.7308      8.59  |  Q       |          |          |     V   |
21+40      19.7897      8.55  |  Q       |          |          |     V   |
21+45      19.8483      8.51  |  Q       |          |          |     V   |
21+50      19.9067      8.47  |  Q       |          |          |      V  |
21+55      19.9647      8.43  |  Q       |          |          |      V  |
22+ 0      20.0226      8.40  |  Q       |          |          |      V  |
22+ 5      20.0802      8.36  |  Q       |          |          |      V  |
22+10      20.1375      8.33  |  Q       |          |          |      V  |
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  22+15      20.1946      8.29  |  Q      |         |         |      V  |
  22+20      20.2515      8.26  |  Q      |         |         |      V  |
  22+25      20.3082      8.23  |  Q      |         |         |      V  |
  22+30      20.3646      8.19  |  Q      |         |         |      V  |
  22+35      20.4208      8.16  |  Q      |         |         |      V  |
  22+40      20.4768      8.13  |  Q      |         |         |       V |
  22+45      20.5326      8.10  |  Q      |         |         |       V |
  22+50      20.5881      8.07  |  Q      |         |         |       V |
  22+55      20.6435      8.04  |  Q      |         |         |       V |
  23+ 0      20.6987      8.01  |  Q      |         |         |       V |
  23+ 5      20.7536      7.98  |  Q      |         |         |       V |
  23+10      20.8084      7.95  |  Q      |         |         |       V |
  23+15      20.8630      7.92  |  Q      |         |         |       V |
  23+20      20.9173      7.90  |  Q      |         |         |       V |
  23+25      20.9715      7.87  |  Q      |         |         |        V|
  23+30      21.0255      7.84  |  Q      |         |         |        V|
  23+35      21.0794      7.82  |  Q      |         |         |        V|
  23+40      21.1330      7.79  |  Q      |         |         |        V|
  23+45      21.1865      7.76  |  Q      |         |         |        V|
  23+50      21.2398      7.74  |  Q      |         |         |        V|
  23+55      21.2929      7.71  |  Q      |         |         |        V|
  24+ 0      21.3459      7.69  |  Q      |         |         |        V|
  24+ 5      21.3967      7.38  | Q       |         |         |        V|
  24+10      21.4391      6.16  | Q       |         |         |        V|
  24+15      21.4617      3.28  |Q        |         |         |        V|
  24+20      21.4753      1.98  Q         |         |         |        V|
  24+25      21.4843      1.30  Q         |         |         |        V|
  24+30      21.4901      0.84  Q         |         |         |        V|
  24+35      21.4937      0.53  Q         |         |         |        V|
  24+40      21.4959      0.32  Q         |         |         |        V|
  24+45      21.4972      0.19  Q         |         |         |        V|
  24+50      21.4981      0.13  Q         |         |         |        V|
  24+55      21.4987      0.09  Q         |         |         |        V|
  25+ 0      21.4992      0.06  Q         |         |         |        V|
  25+ 5      21.4995      0.04  Q         |         |         |        V|
  25+10      21.4996      0.02  Q         |         |         |        V|
  25+15      21.4996      0.01  Q         |         |         |         V
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Attachment 3

Proposed Conditions
Rational Method Calculations

Area 'A' – 10 Year - Proposed Condition – Rational Method

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                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY RATIONAL
DRAINAGE AREA 'A'
10 YEAR STORM
DECEMBER 15, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


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Process from Point/Station      100.000 to Point/Station      101.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.700
Decimal fraction soil group B = 0.300
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 39.20
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.554(In/Hr)
Initial subarea data:
Initial area flow distance =   470.000(Ft.)
Top (of initial area) elevation =  2119.000(Ft.)
Bottom (of initial area) elevation =  2093.900(Ft.)
Difference in elevation =    25.100(Ft.)
Slope =    0.05340  s(%)=       5.34
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.674 min.
Rainfall intensity =      3.872(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.771
Subarea runoff =      5.942(CFS)
Total initial stream area =        1.990(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.554(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2093.900(Ft.)
End of street segment elevation =  2086.000(Ft.)
Length of street segment  =   790.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
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Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      7.700(CFS)
Depth of flow =   0.443(Ft.), Average velocity =   2.936(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  15.797(Ft.)
Flow velocity =   2.94(Ft/s)
Travel time =    4.48 min.     TC =   13.16  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 44.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.526(In/Hr)
Rainfall intensity =      2.892(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.732
Subarea runoff =      3.442(CFS) for    2.440(Ac.)
Total runoff =      9.384(CFS)
Effective area this stream =        4.43(Ac.)
Total Study Area (Main Stream No. 1) =        4.43(Ac.)
Area averaged Fm value =    0.539(In/Hr)
Street flow at end of street =      9.384(CFS)
Half street flow at end of street =      9.384(CFS)
Depth of flow =   0.468(Ft.), Average velocity =   3.081(Ft/s)
Flow width (from curb towards crown)=  17.086(Ft.)


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Process from Point/Station      102.000 to Point/Station      103.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
____________________________________________________________________________
Top of street segment elevation =  2086.000(Ft.)
End of street segment elevation =  2007.000(Ft.)
Length of street segment  =   900.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      9.848(CFS)
Depth of flow =   0.351(Ft.), Average velocity =   7.122(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  11.207(Ft.)
Flow velocity =   7.12(Ft/s)
Travel time =    2.11 min.     TC =   15.26  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.300
Decimal fraction soil group B = 0.700
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 48.80
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.494(In/Hr)
Rainfall intensity =      2.607(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.717
Subarea runoff =      0.839(CFS) for    1.040(Ac.)
Total runoff =     10.223(CFS)
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Effective area this stream =        5.47(Ac.)
Total Study Area (Main Stream No. 1) =        5.47(Ac.)
Area averaged Fm value =    0.530(In/Hr)
Street flow at end of street =     10.223(CFS)
Half street flow at end of street =     10.223(CFS)
Depth of flow =   0.354(Ft.), Average velocity =   7.185(Ft/s)
Flow width (from curb towards crown)=  11.385(Ft.)


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Process from Point/Station      103.000 to Point/Station      104.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  2000.000(Ft.)
Downstream point/station elevation =  1999.000(Ft.)
Pipe length  =    94.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    10.223(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    10.223(CFS)
Normal flow depth in pipe =   13.92(In.)
Flow top width inside pipe =   15.07(In.)
Critical Depth =   14.78(In.)
Pipe flow velocity =      6.97(Ft/s)
Travel time through pipe =    0.22 min.
Time of concentration (TC) =    15.49 min.


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Process from Point/Station      103.000 to Point/Station      104.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      5.470(Ac.)
Runoff from this stream =     10.223(CFS)
Time of concentration =   15.49 min.
Rainfall intensity =     2.580(In/Hr)
Area averaged loss rate (Fm) =    0.5304(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      105.000 to Point/Station      106.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Initial subarea data:
Initial area flow distance =   580.000(Ft.)
Top (of initial area) elevation =  2116.500(Ft.)
Bottom (of initial area) elevation =  2093.800(Ft.)
Difference in elevation =    22.700(Ft.)
Slope =    0.03914  s(%)=       3.91
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.040 min.
Rainfall intensity =      3.495(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.749
Subarea runoff =      4.790(CFS)
Total initial stream area =        1.830(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


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Process from Point/Station      106.000 to Point/Station      107.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
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Top of street segment elevation =  2093.800(Ft.)
End of street segment elevation =  2086.000(Ft.)
Length of street segment  =   755.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      5.017(CFS)
Depth of flow =   0.391(Ft.), Average velocity =   2.682(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  13.206(Ft.)
Flow velocity =   2.68(Ft/s)
Travel time =    4.69 min.     TC =   14.73  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 44.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.526(In/Hr)
Rainfall intensity =      2.673(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.709
Subarea runoff =      0.384(CFS) for    0.900(Ac.)
Total runoff =      5.174(CFS)
Effective area this stream =        2.73(Ac.)
Total Study Area (Main Stream No. 1) =        8.20(Ac.)
Area averaged Fm value =    0.567(In/Hr)
Street flow at end of street =      5.174(CFS)
Half street flow at end of street =      5.174(CFS)
Depth of flow =   0.394(Ft.), Average velocity =   2.702(Ft/s)
Flow width (from curb towards crown)=  13.372(Ft.)


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Process from Point/Station      107.000 to Point/Station      108.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2086.000(Ft.)
End of street segment elevation =  2011.200(Ft.)
Length of street segment  =   760.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      7.667(CFS)
Depth of flow =   0.323(Ft.), Average velocity =   7.026(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.821(Ft.)
Flow velocity =   7.03(Ft/s)
Travel time =    1.80 min.     TC =   16.53  min.
 Adding area flow to street
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RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.400
Decimal fraction soil group B = 0.600
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 46.40
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.511(In/Hr)
Rainfall intensity =      2.465(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.704
Subarea runoff =      4.925(CFS) for    3.090(Ac.)
Total runoff =     10.099(CFS)
Effective area this stream =        5.82(Ac.)
Total Study Area (Main Stream No. 1) =       11.29(Ac.)
Area averaged Fm value =    0.537(In/Hr)
Street flow at end of street =     10.099(CFS)
Half street flow at end of street =     10.099(CFS)
Depth of flow =   0.348(Ft.), Average velocity =   7.486(Ft/s)
Flow width (from curb towards crown)=  11.056(Ft.)


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Process from Point/Station      108.000 to Point/Station      104.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2003.000(Ft.)
Downstream point/station elevation =  1999.000(Ft.)
Pipe length  =    43.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    10.099(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =    10.099(CFS)
Normal flow depth in pipe =    9.15(In.)
Flow top width inside pipe =   10.21(In.)
Critical depth could not be calculated.
Pipe flow velocity =     15.71(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =    16.58 min.


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Process from Point/Station      108.000 to Point/Station      104.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      5.820(Ac.)
Runoff from this stream =     10.099(CFS)
Time of concentration =   16.58 min.
Rainfall intensity =     2.460(In/Hr)
Area averaged loss rate (Fm) =    0.5370(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     10.22     5.470     15.49    0.530      2.580
2     10.10     5.820     16.58    0.537      2.460
Qmax(1) =
          1.000 *    1.000 *    10.223) +
          1.062 *    0.934 *    10.099) + =      20.247
Qmax(2) =
          0.941 *    1.000 *    10.223) +
          1.000 *    1.000 *    10.099) + =      19.723

Total of 2 streams to confluence:
Flow rates before confluence point:
      10.223      10.099
Maximum flow rates at confluence using above data:
       20.247       19.723
Area of streams before confluence:
```

```
        5.470        5.820
Effective area values after confluence:
       10.907       11.290
Results of confluence:
Total flow rate =     20.247(CFS)
Time of concentration =    15.489 min.
Effective stream area after confluence =     10.907(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.534(In/Hr)
Study area total (this main stream) =      11.29(Ac.)


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Process from Point/Station      104.000 to Point/Station      109.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1999.000(Ft.)
Downstream point/station elevation =  1996.500(Ft.)
Pipe length  =   230.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    20.247(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    20.247(CFS)
Normal flow depth in pipe =   17.13(In.)
Flow top width inside pipe =   21.69(In.)
Critical Depth =   19.37(In.)
Pipe flow velocity =      8.44(Ft/s)
Travel time through pipe =    0.45 min.
Time of concentration (TC) =    15.94 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      109.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     10.907(Ac.)
Runoff from this stream =     20.247(CFS)
Time of concentration =   15.94 min.
Rainfall intensity =     2.529(In/Hr)
Area averaged loss rate (Fm) =    0.5338(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 2


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Process from Point/Station      110.000 to Point/Station      111.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.400
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 41.60
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.541(In/Hr)
Initial subarea data:
Initial area flow distance =   800.000(Ft.)
Top (of initial area) elevation =  2094.600(Ft.)
Bottom (of initial area) elevation =  2032.000(Ft.)
Difference in elevation =    62.600(Ft.)
Slope =    0.07825  s(%)=       7.82
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.941 min.
Rainfall intensity =      3.520(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.762
Subarea runoff =     11.072(CFS)
Total initial stream area =        4.130(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.541(In/Hr)
```

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Process from Point/Station      110.000 to Point/Station      111.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      4.130(Ac.)
Runoff from this stream =     11.072(CFS)
Time of concentration =    9.94 min.
Rainfall intensity =     3.520(In/Hr)
Area averaged loss rate (Fm) =    0.5409(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      112.000 to Point/Station      113.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.900
Decimal fraction soil group B = 0.100
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 34.40
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.578(In/Hr)
Initial subarea data:
Initial area flow distance =   800.000(Ft.)
Top (of initial area) elevation =  2094.600(Ft.)
Bottom (of initial area) elevation =  2032.000(Ft.)
Difference in elevation =    62.600(Ft.)
Slope =    0.07825  s(%)=       7.82
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.941 min.
Rainfall intensity =      3.520(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.752
Subarea runoff =     11.042(CFS)
Total initial stream area =        4.170(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.578(In/Hr)


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Process from Point/Station      113.000 to Point/Station      111.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  2024.000(Ft.)
Downstream point/station elevation =  2022.000(Ft.)
Pipe length  =    38.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    11.042(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =    11.042(CFS)
Normal flow depth in pipe =    9.64(In.)
Flow top width inside pipe =   14.37(In.)
Critical depth could not be calculated.
Pipe flow velocity =     13.23(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =     9.99 min.


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Process from Point/Station      113.000 to Point/Station      111.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      4.170(Ac.)
Runoff from this stream =     11.042(CFS)
Time of concentration =    9.99 min.
Rainfall intensity =     3.508(In/Hr)
Area averaged loss rate (Fm) =    0.5775(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:
```

```
Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     11.07     4.130      9.94    0.541      3.520
2     11.04     4.170      9.99    0.578      3.508
Qmax(1) =
          1.000 *    1.000 *    11.072) +
          1.004 *    0.995 *    11.042) + =      22.105
Qmax(2) =
          0.996 *    1.000 *    11.072) +
          1.000 *    1.000 *    11.042) + =      22.070

Total of 2 streams to confluence:
Flow rates before confluence point:
      11.072      11.042
Maximum flow rates at confluence using above data:
       22.105       22.070
Area of streams before confluence:
        4.130        4.170
Effective area values after confluence:
        8.280        8.300
Results of confluence:
Total flow rate =     22.105(CFS)
Time of concentration =     9.941 min.
Effective stream area after confluence =      8.280(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.559(In/Hr)
Study area total (this main stream) =       8.30(Ac.)


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Process from Point/Station      111.000 to Point/Station      109.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2022.000(Ft.)
Downstream point/station elevation =  1996.500(Ft.)
Pipe length  =   244.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    22.105(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    22.105(CFS)
Normal flow depth in pipe =   10.58(In.)
Flow top width inside pipe =   17.72(In.)
Critical depth could not be calculated.
Pipe flow velocity =     20.46(Ft/s)
Travel time through pipe =    0.20 min.
Time of concentration (TC) =    10.14 min.


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Process from Point/Station      111.000 to Point/Station      109.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      8.280(Ac.)
Runoff from this stream =     22.105(CFS)
Time of concentration =   10.14 min.
Rainfall intensity =     3.471(In/Hr)
Area averaged loss rate (Fm) =    0.5593(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     20.25    10.907     15.94    0.534      2.529
2     22.11     8.280     10.14    0.559      3.471
Qmax(1) =
```

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          1.000 *    1.000 *    20.247) +
          0.676 *    1.000 *    22.105) + =      35.198
Qmax(2) =
          1.472 *    0.636 *    20.247) +
          1.000 *    1.000 *    22.105) + =      41.066

Total of 2 main streams to confluence:
Flow rates before confluence point:
      21.247      23.105
Maximum flow rates at confluence using above data:
       35.198       41.066
Area of streams before confluence:
       10.907        8.280
Effective area values after confluence:
       19.187       15.217


Results of confluence:
Total flow rate =     41.066(CFS)
Time of concentration =    10.140 min.
Effective stream area after confluence  =     15.217(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.545(In/Hr)
Study area total =      19.19(Ac.)


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Process from Point/Station      109.000 to Point/Station      114.100
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------------
Upstream point/station elevation =  1996.500(Ft.)
Downstream point/station elevation =  1974.000(Ft.)
Pipe length  =  1288.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    41.066(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    41.066(CFS)
Normal flow depth in pipe =   19.52(In.)
Flow top width inside pipe =   28.60(In.)
Critical Depth =   25.80(In.)
Pipe flow velocity =     12.14(Ft/s)
Travel time through pipe =    1.77 min.
Time of concentration (TC) =    11.91 min.


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Process from Point/Station      109.000 to Point/Station      114.100
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     15.217(Ac.)
Runoff from this stream =     41.066(CFS)
Time of concentration =   11.91 min.
Rainfall intensity =     3.102(In/Hr)
Area averaged loss rate (Fm) =    0.5448(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 2


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Process from Point/Station      126.000 to Point/Station      127.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Initial subarea data:
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Initial area flow distance =   500.000(Ft.)
Top (of initial area) elevation =  2031.300(Ft.)
Bottom (of initial area) elevation =  2002.000(Ft.)
Difference in elevation =    29.300(Ft.)
Slope =    0.05860  s(%)=       5.86
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.728 min.
Rainfall intensity =      3.855(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.763
Subarea runoff =      2.648(CFS)
Total initial stream area =        0.900(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


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Process from Point/Station      127.000 to Point/Station      128.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2002.000(Ft.)
End of street segment elevation =  1982.000(Ft.)
Length of street segment  =   850.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      3.819(CFS)
Depth of flow =   0.325(Ft.), Average velocity =   3.450(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.901(Ft.)
Flow velocity =   3.45(Ft/s)
Travel time =    4.11 min.     TC =   12.83  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Rainfall intensity =      2.943(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.721
Subarea runoff =      2.273(CFS) for    1.420(Ac.)
Total runoff =      4.921(CFS)
Effective area this stream =        2.32(Ac.)
Total Study Area (Main Stream No. 2) =       21.91(Ac.)
Area averaged Fm value =    0.587(In/Hr)
Street flow at end of street =      4.921(CFS)
Half street flow at end of street =      4.921(CFS)
Depth of flow =   0.347(Ft.), Average velocity =   3.657(Ft/s)
Flow width (from curb towards crown)=  11.040(Ft.)


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Process from Point/Station      128.000 to Point/Station      114.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1976.000(Ft.)
Downstream point/station elevation =  1974.000(Ft.)
Pipe length  =    35.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.921(CFS)
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Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     4.921(CFS)
Normal flow depth in pipe =    6.54(In.)
Flow top width inside pipe =   11.95(In.)
Critical Depth =   10.95(In.)
Pipe flow velocity =     11.23(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =    12.89 min.


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Process from Point/Station      128.000 to Point/Station      114.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.320(Ac.)
Runoff from this stream =      4.921(CFS)
Time of concentration =   12.89 min.
Rainfall intensity =     2.935(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 3


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Process from Point/Station      100.000 to Point/Station      129.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Initial subarea data:
Initial area flow distance =   664.000(Ft.)
Top (of initial area) elevation =  2119.000(Ft.)
Bottom (of initial area) elevation =  2044.500(Ft.)
Difference in elevation =    74.500(Ft.)
Slope =    0.11220  s(%)=      11.22
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.586 min.
Rainfall intensity =      3.900(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.765
Subarea runoff =      1.133(CFS)
Total initial stream area =        0.380(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


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Process from Point/Station      129.000 to Point/Station      130.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
Top of street segment elevation =  2044.500(Ft.)
End of street segment elevation =  1983.000(Ft.)
Length of street segment  =   726.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
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 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      1.560(CFS)
Depth of flow =   0.215(Ft.), Average velocity =   4.865(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   4.404(Ft.)
Flow velocity =   4.86(Ft/s)
Travel time =    2.49 min.     TC =   11.07  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Rainfall intensity =      3.264(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.738
Subarea runoff =      0.794(CFS) for    0.420(Ac.)
Total runoff =      1.928(CFS)
Effective area this stream =        0.80(Ac.)
Total Study Area (Main Stream No. 3) =       22.71(Ac.)
Area averaged Fm value =    0.587(In/Hr)
Street flow at end of street =      1.928(CFS)
Half street flow at end of street =      1.928(CFS)
Depth of flow =   0.228(Ft.), Average velocity =   5.008(Ft/s)
Flow width (from curb towards crown)=   5.082(Ft.)


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Process from Point/Station      130.000 to Point/Station      131.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1975.300(Ft.)
Downstream point/station elevation =  1974.300(Ft.)
Pipe length  =    36.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.928(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     1.928(CFS)
Normal flow depth in pipe =    5.54(In.)
Flow top width inside pipe =    8.75(In.)
Critical Depth =    7.59(In.)
Pipe flow velocity =      6.75(Ft/s)
Travel time through pipe =    0.09 min.
Time of concentration (TC) =    11.16 min.


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Process from Point/Station      130.000 to Point/Station      131.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 3 in normal stream number 1
Stream flow area =      0.800(Ac.)
Runoff from this stream =      1.928(CFS)
Time of concentration =   11.16 min.
Rainfall intensity =     3.246(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      118.000 to Point/Station      132.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
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Initial subarea data:
Initial area flow distance =   875.000(Ft.)
Top (of initial area) elevation =  2056.700(Ft.)
Bottom (of initial area) elevation =  2013.000(Ft.)
Difference in elevation =    43.700(Ft.)
Slope =    0.04994  s(%)=       4.99
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.272 min.
Rainfall intensity =      3.223(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.736
Subarea runoff =     10.963(CFS)
Total initial stream area =        4.620(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


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Process from Point/Station      132.000 to Point/Station      131.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
----------------------------------------------------------------------
Top of street segment elevation =  2013.000(Ft.)
End of street segment elevation =  1983.000(Ft.)
Length of street segment  =   326.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =     10.991(CFS)
Depth of flow =   0.359(Ft.), Average velocity =   7.441(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  11.621(Ft.)
Flow velocity =   7.44(Ft/s)
Travel time =    0.73 min.     TC =   12.00  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     10.814(CFS)
therefore the upstream flow rate of Q =     10.963(CFS) is being used
Rainfall intensity =      3.085(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.729
Subarea runoff =      0.000(CFS) for    0.190(Ac.)
Total runoff =     10.963(CFS)
Effective area this stream =        4.81(Ac.)
Total Study Area (Main Stream No. 3) =       27.52(Ac.)
Area averaged Fm value =    0.587(In/Hr)
Street flow at end of street =     10.963(CFS)
Half street flow at end of street =     10.963(CFS)
Depth of flow =   0.359(Ft.), Average velocity =   7.437(Ft/s)
Flow width (from curb towards crown)=  11.608(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      132.000 to Point/Station      131.000
**** CONFLUENCE OF MINOR STREAMS ****
----------------------------------------------------------------------
```

```
Along Main Stream number: 3 in normal stream number 2
Stream flow area =      4.810(Ac.)
Runoff from this stream =     10.963(CFS)
Time of concentration =   12.00 min.
Rainfall intensity =     3.085(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1      1.93     0.800     11.16    0.587      3.246
2     10.96     4.810     12.00    0.587      3.085
Qmax(1) =
          1.000 *    1.000 *     1.928) +
          1.064 *    0.930 *    10.963) + =      12.779
Qmax(2) =
          0.939 *    1.000 *     1.928) +
          1.000 *    1.000 *    10.963) + =      12.774

Total of 2 streams to confluence:
Flow rates before confluence point:
       1.928      10.963
Maximum flow rates at confluence using above data:
       12.779       12.774
Area of streams before confluence:
        0.800        4.810
Effective area values after confluence:
        5.273        5.610
Results of confluence:
Total flow rate =     12.779(CFS)
Time of concentration =    11.162 min.
Effective stream area after confluence =      5.273(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.587(In/Hr)
Study area total (this main stream) =       5.61(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      131.000 to Point/Station      114.300
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1974.300(Ft.)
Downstream point/station elevation =  1974.000(Ft.)
Pipe length  =    38.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    12.779(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    12.779(CFS)
Normal flow depth in pipe =   15.68(In.)
Flow top width inside pipe =   18.27(In.)
Critical Depth =   15.98(In.)
Pipe flow velocity =      6.63(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =    11.26 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      131.000 to Point/Station      114.300
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      5.273(Ac.)
Runoff from this stream =     12.779(CFS)
Time of concentration =   11.26 min.
Rainfall intensity =     3.226(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 4
```

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      112.000 to Point/Station      118.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Initial subarea data:
Initial area flow distance =   909.000(Ft.)
Top (of initial area) elevation =  2094.600(Ft.)
Bottom (of initial area) elevation =  2056.700(Ft.)
Difference in elevation =    37.900(Ft.)
Slope =    0.04169  s(%)=       4.17
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.866 min.
Rainfall intensity =      3.109(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.730
Subarea runoff =      7.425(CFS)
Total initial stream area =        3.270(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      118.000 to Point/Station      117.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  2048.000(Ft.)
Downstream point/station elevation =  2047.400(Ft.)
Pipe length  =    44.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.425(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     7.425(CFS)
Normal flow depth in pipe =   12.09(In.)
Flow top width inside pipe =   11.86(In.)
Critical Depth =   13.02(In.)
Pipe flow velocity =      7.01(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =    11.97 min.


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Process from Point/Station      118.000 to Point/Station      117.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 4 in normal stream number 1
Stream flow area =      3.270(Ac.)
Runoff from this stream =      7.425(CFS)
Time of concentration =   11.97 min.
Rainfall intensity =     3.090(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      115.000 to Point/Station      116.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
```

```
Initial subarea data:
Initial area flow distance =   765.000(Ft.)
Top (of initial area) elevation =  2094.200(Ft.)
Bottom (of initial area) elevation =  2056.000(Ft.)
Difference in elevation =    38.200(Ft.)
Slope =    0.04993  s(%)=       4.99
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.683 min.
Rainfall intensity =      3.347(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.742
Subarea runoff =      7.055(CFS)
Total initial stream area =        2.840(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


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Process from Point/Station      116.000 to Point/Station      117.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2048.000(Ft.)
Downstream point/station elevation =  2047.400(Ft.)
Pipe length  =    31.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.055(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     7.055(CFS)
Normal flow depth in pipe =   10.01(In.)
Flow top width inside pipe =   14.14(In.)
Critical Depth =   12.76(In.)
Pipe flow velocity =      8.11(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =    10.75 min.


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Process from Point/Station      116.000 to Point/Station      117.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 4 in normal stream number 2
Stream flow area =      2.840(Ac.)
Runoff from this stream =      7.055(CFS)
Time of concentration =   10.75 min.
Rainfall intensity =     3.333(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1      7.42     3.270     11.97    0.587      3.090
2      7.05     2.840     10.75    0.587      3.333
Qmax(1) =
          1.000 *    1.000 *     7.425) +
          0.912 *    1.000 *     7.055) + =      13.857
Qmax(2) =
          1.097 *    0.898 *     7.425) +
          1.000 *    1.000 *     7.055) + =      14.366

Total of 2 streams to confluence:
Flow rates before confluence point:
       7.425       7.055
Maximum flow rates at confluence using above data:
       13.857       14.366
Area of streams before confluence:
        3.270        2.840
Effective area values after confluence:
        6.110        5.776
Results of confluence:
Total flow rate =     14.366(CFS)
```

```
Time of concentration =    10.746 min.
Effective stream area after confluence =      5.776(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.587(In/Hr)
Study area total (this main stream) =       6.11(Ac.)


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Process from Point/Station      117.000 to Point/Station      119.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  2047.400(Ft.)
Downstream point/station elevation =  2036.000(Ft.)
Pipe length  =   477.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    14.366(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    14.366(CFS)
Normal flow depth in pipe =   13.16(In.)
Flow top width inside pipe =   15.96(In.)
Critical Depth =   16.69(In.)
Pipe flow velocity =     10.38(Ft/s)
Travel time through pipe =    0.77 min.
Time of concentration (TC) =    11.51 min.


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Process from Point/Station      117.000 to Point/Station      119.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 4 in normal stream number 1
Stream flow area =      5.776(Ac.)
Runoff from this stream =     14.366(CFS)
Time of concentration =   11.51 min.
Rainfall intensity =     3.176(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      105.000 to Point/Station      120.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Initial subarea data:
Initial area flow distance =   586.000(Ft.)
Top (of initial area) elevation =  2116.500(Ft.)
Bottom (of initial area) elevation =  2052.500(Ft.)
Difference in elevation =    64.000(Ft.)
Slope =    0.10922  s(%)=      10.92
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.211 min.
Rainfall intensity =      4.024(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.769
Subarea runoff =      4.362(CFS)
Total initial stream area =        1.410(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


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Process from Point/Station      120.000 to Point/Station      119.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  2044.500(Ft.)
Downstream point/station elevation =  2036.000(Ft.)
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Pipe length  =    93.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.362(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     4.362(CFS)
Normal flow depth in pipe =    6.50(In.)
Flow top width inside pipe =    8.06(In.)
Critical depth could not be calculated.
Pipe flow velocity =     12.76(Ft/s)
Travel time through pipe =    0.12 min.
Time of concentration (TC) =     8.33 min.


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Process from Point/Station      120.000 to Point/Station      119.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 4 in normal stream number 2
Stream flow area =      1.410(Ac.)
Runoff from this stream =      4.362(CFS)
Time of concentration =    8.33 min.
Rainfall intensity =     3.983(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     14.37     5.776     11.51    0.587      3.176
2      4.36     1.410      8.33    0.587      3.983
Qmax(1) =
          1.000 *    1.000 *    14.366) +
          0.762 *    1.000 *     4.362) + =      17.691
Qmax(2) =
          1.311 *    0.724 *    14.366) +
          1.000 *    1.000 *     4.362) + =      17.998

Total of 2 streams to confluence:
Flow rates before confluence point:
      14.366       4.362
Maximum flow rates at confluence using above data:
       17.691       17.998
Area of streams before confluence:
        5.776        1.410
Effective area values after confluence:
        7.186        5.590
Results of confluence:
Total flow rate =     17.998(CFS)
Time of concentration =     8.333 min.
Effective stream area after confluence =      5.590(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.587(In/Hr)
Study area total (this main stream) =       7.19(Ac.)


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Process from Point/Station      119.000 to Point/Station      121.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2036.000(Ft.)
Downstream point/station elevation =  2003.000(Ft.)
Pipe length  =   400.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    17.998(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =    17.998(CFS)
Normal flow depth in pipe =   11.91(In.)
Flow top width inside pipe =   12.14(In.)
Critical depth could not be calculated.
Pipe flow velocity =     17.23(Ft/s)
Travel time through pipe =    0.39 min.
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Time of concentration (TC) =     8.72 min.


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Process from Point/Station      119.000 to Point/Station      121.000
**** CONFLUENCE OF MINOR STREAMS ****
----------------------------------------------------------------------------
Along Main Stream number: 4 in normal stream number 1
Stream flow area =      5.590(Ac.)
Runoff from this stream =     17.998(CFS)
Time of concentration =    8.72 min.
Rainfall intensity =     3.858(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      124.000 to Point/Station      125.000
**** INITIAL AREA EVALUATION ****
----------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Initial subarea data:
Initial area flow distance =   972.000(Ft.)
Top (of initial area) elevation =  2032.500(Ft.)
Bottom (of initial area) elevation =  2013.400(Ft.)
Difference in elevation =    19.100(Ft.)
Slope =    0.01965  s(%)=       1.97
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.167 min.
Rainfall intensity =      2.747(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.708
Subarea runoff =      4.724(CFS)
Total initial stream area =        2.430(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


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Process from Point/Station      125.000 to Point/Station      123.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
----------------------------------------------------------------------------
Upstream point/station elevation =  2005.000(Ft.)
Downstream point/station elevation =  2004.500(Ft.)
Pipe length  =    36.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.724(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     4.724(CFS)
Normal flow depth in pipe =    8.55(In.)
Flow top width inside pipe =   14.85(In.)
Critical Depth =   10.58(In.)
Pipe flow velocity =      6.54(Ft/s)
Travel time through pipe =    0.09 min.
Time of concentration (TC) =    14.26 min.


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Process from Point/Station      125.000 to Point/Station      123.000
**** SUBAREA FLOW ADDITION ****
----------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
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Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Time of concentration =    14.26 min.
Rainfall intensity =      2.734(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.707
Subarea runoff =      7.530(CFS) for    3.910(Ac.)
Total runoff =     12.254(CFS)
Effective area this stream =        6.34(Ac.)
Total Study Area (Main Stream No. 4) =       41.38(Ac.)
Area averaged Fm value =    0.587(In/Hr)


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Process from Point/Station      123.000 to Point/Station      121.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2004.500(Ft.)
Downstream point/station elevation =  2003.000(Ft.)
Pipe length  =    82.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    12.254(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    12.254(CFS)
Normal flow depth in pipe =   12.89(In.)
Flow top width inside pipe =   16.23(In.)
Critical Depth =   15.89(In.)
Pipe flow velocity =      9.04(Ft/s)
Travel time through pipe =    0.15 min.
Time of concentration (TC) =    14.41 min.


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Process from Point/Station      123.000 to Point/Station      121.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 4 in normal stream number 2
Stream flow area =      6.340(Ac.)
Runoff from this stream =     12.254(CFS)
Time of concentration =   14.41 min.
Rainfall intensity =     2.714(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     18.00     5.590      8.72    0.587      3.858
2     12.25     6.340     14.41    0.587      2.714
Qmax(1) =
          1.000 *    1.000 *    17.998) +
          1.538 *    0.605 *    12.254) + =      29.399
Qmax(2) =
          0.650 *    1.000 *    17.998) +
          1.000 *    1.000 *    12.254) + =      23.959

Total of 2 streams to confluence:
Flow rates before confluence point:
      17.998      12.254
Maximum flow rates at confluence using above data:
       29.399       23.959
Area of streams before confluence:
        5.590        6.340
Effective area values after confluence:
        9.426       11.930
Results of confluence:
Total flow rate =     29.399(CFS)
Time of concentration =     8.720 min.
Effective stream area after confluence =      9.426(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.587(In/Hr)
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Study area total (this main stream) =      11.93(Ac.)


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Process from Point/Station      121.000 to Point/Station      114.400
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2003.000(Ft.)
Downstream point/station elevation =  1974.600(Ft.)
Pipe length  =   265.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    29.399(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    29.399(CFS)
Normal flow depth in pipe =   12.80(In.)
Flow top width inside pipe =   16.32(In.)
Critical depth could not be calculated.
Pipe flow velocity =     21.86(Ft/s)
Travel time through pipe =    0.20 min.
Time of concentration (TC) =     8.92 min.


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Process from Point/Station      121.000 to Point/Station      114.400
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 4
Stream flow area =      9.426(Ac.)
Runoff from this stream =     29.399(CFS)
Time of concentration =    8.92 min.
Rainfall intensity =     3.797(In/Hr)
Area averaged loss rate (Fm) =    0.5867(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     41.07    15.217     11.91    0.545      3.102
2      4.92     2.320     12.89    0.587      2.935
3     12.78     5.273     11.26    0.587      3.226
4     29.40     9.426      8.92    0.587      3.797
Qmax(1) =
          1.000 *    1.000 *    41.066) +
          1.071 *    0.924 *     4.921) +
          0.953 *    1.000 *    12.779) +
          0.784 *    1.000 *    29.399) + =      81.150
Qmax(2) =
          0.935 *    1.000 *    41.066) +
          1.000 *    1.000 *     4.921) +
          0.890 *    1.000 *    12.779) +
          0.732 *    1.000 *    29.399) + =      76.184
Qmax(3) =
          1.049 *    0.945 *    41.066) +
          1.124 *    0.874 *     4.921) +
          1.000 *    1.000 *    12.779) +
          0.822 *    1.000 *    29.399) + =      82.498
Qmax(4) =
          1.272 *    0.749 *    41.066) +
          1.367 *    0.692 *     4.921) +
          1.216 *    0.793 *    12.779) +
          1.000 *    1.000 *    29.399) + =      85.499

Total of 4 main streams to confluence:
Flow rates before confluence point:
      42.066       5.921      13.779      30.399
Maximum flow rates at confluence using above data:
       81.150       76.184       82.498       85.499
Area of streams before confluence:
       15.217        2.320        5.273        9.426
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Effective area values after confluence:
       32.060       32.236       31.112       26.613


Results of confluence:
Total flow rate =     85.499(CFS)
Time of concentration =     8.922 min.
Effective stream area after confluence  =     26.613(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.567(In/Hr)
Study area total =      32.24(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      121.000 to Point/Station      114.400
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.578(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     82.657(CFS)
therefore the upstream flow rate of Q =     85.499(CFS) is being used
Time of concentration =     8.92 min.
Rainfall intensity =      3.797(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.765
Subarea runoff =      0.000(CFS) for    1.830(Ac.)
Total runoff =     85.499(CFS)
Effective area this stream =       28.44(Ac.)
Total Study Area (Main Stream No. 1) =       43.21(Ac.)
Area averaged Fm value =    0.568(In/Hr)
End of computations, Total Study Area =           43.21 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.617
Area averaged SCS curve number =  37.3
```

Area ‘A’ – 100 Year - Proposed Condition – Rational Method

```
              San Bernardino County Rational Hydrology Program

                  (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY RATIONAL
DRAINAGE AREA 'A'
100 YEAR STORM
DECEMBER 15, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      101.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.700
Decimal fraction soil group B = 0.300
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 39.20
Adjusted SCS curve number for AMC 3 = 59.20
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.414(In/Hr)
Initial subarea data:
Initial area flow distance =   470.000(Ft.)
Top (of initial area) elevation =  2119.000(Ft.)
Bottom (of initial area) elevation =  2093.900(Ft.)
Difference in elevation =    25.100(Ft.)
Slope =    0.05340  s(%)=       5.34
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.674 min.
Rainfall intensity =      5.808(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.836
Subarea runoff =      9.660(CFS)
Total initial stream area =        1.990(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.414(In/Hr)


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Process from Point/Station      101.000 to Point/Station      102.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2093.900(Ft.)
End of street segment elevation =  2086.000(Ft.)
Length of street segment  =   790.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
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Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =     13.035(CFS)
Depth of flow =   0.513(Ft.), Average velocity =   3.394(Ft/s)
Warning: depth of flow exceeds top of curb
Note:  depth of flow exceeds top of street crown.
Distance that curb overflow reaches into property =    0.64(Ft.)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  18.000(Ft.)
Flow velocity =   3.39(Ft/s)
Travel time =    3.88 min.     TC =   12.55  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 44.00
Adjusted SCS curve number for AMC 3 = 64.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.374(In/Hr)
Rainfall intensity =      4.484(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.821
Subarea runoff =      6.655(CFS) for    2.440(Ac.)
Total runoff =     16.315(CFS)
Effective area this stream =        4.43(Ac.)
Total Study Area (Main Stream No. 1) =        4.43(Ac.)
Area averaged Fm value =    0.392(In/Hr)
Street flow at end of street =     16.315(CFS)
Half street flow at end of street =     16.315(CFS)
Depth of flow =   0.549(Ft.), Average velocity =   3.580(Ft/s)
Warning: depth of flow exceeds top of curb
Note:  depth of flow exceeds top of street crown.
Distance that curb overflow reaches into property =    2.47(Ft.)
Flow width (from curb towards crown)=  18.000(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2086.000(Ft.)
End of street segment elevation =  2007.000(Ft.)
Length of street segment  =   900.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =     17.282(CFS)
Depth of flow =   0.409(Ft.), Average velocity =   8.137(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  14.132(Ft.)
Flow velocity =   8.14(Ft/s)
Travel time =    1.84 min.     TC =   14.40  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.300
Decimal fraction soil group B = 0.700
Decimal fraction soil group C = 0.000
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Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 48.80
Adjusted SCS curve number for AMC 3 = 68.80
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.331(In/Hr)
Rainfall intensity =      4.074(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.816
Subarea runoff =      1.869(CFS) for    1.040(Ac.)
Total runoff =     18.184(CFS)
Effective area this stream =        5.47(Ac.)
Total Study Area (Main Stream No. 1) =        5.47(Ac.)
Area averaged Fm value =    0.380(In/Hr)
Street flow at end of street =     18.184(CFS)
Half street flow at end of street =     18.184(CFS)
Depth of flow =   0.415(Ft.), Average velocity =   8.237(Ft/s)
Flow width (from curb towards crown)=  14.426(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2000.000(Ft.)
Downstream point/station elevation =  1999.000(Ft.)
Pipe length  =    94.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    18.184(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    18.184(CFS)
Normal flow depth in pipe =   15.94(In.)
Flow top width inside pipe =   22.67(In.)
Critical Depth =   18.43(In.)
Pipe flow velocity =      8.21(Ft/s)
Travel time through pipe =    0.19 min.
Time of concentration (TC) =    14.59 min.


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Process from Point/Station      103.000 to Point/Station      104.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      5.470(Ac.)
Runoff from this stream =     18.184(CFS)
Time of concentration =   14.59 min.
Rainfall intensity =     4.037(In/Hr)
Area averaged loss rate (Fm) =    0.3803(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      105.000 to Point/Station      106.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   580.000(Ft.)
Top (of initial area) elevation =  2116.500(Ft.)
Bottom (of initial area) elevation =  2093.800(Ft.)
Difference in elevation =    22.700(Ft.)
Slope =    0.03914  s(%)=       3.91
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.040 min.
Rainfall intensity =      5.243(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.819
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Subarea runoff =      7.859(CFS)
Total initial stream area =        1.830(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


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Process from Point/Station      106.000 to Point/Station      107.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2093.800(Ft.)
End of street segment elevation =  2086.000(Ft.)
Length of street segment  =   755.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      8.497(CFS)
Depth of flow =   0.453(Ft.), Average velocity =   3.045(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  16.322(Ft.)
Flow velocity =   3.04(Ft/s)
Travel time =    4.13 min.     TC =   14.17  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 44.00
Adjusted SCS curve number for AMC 3 = 64.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.374(In/Hr)
Rainfall intensity =      4.119(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.804
Subarea runoff =      1.182(CFS) for    0.900(Ac.)
Total runoff =      9.041(CFS)
Effective area this stream =        2.73(Ac.)
Total Study Area (Main Stream No. 1) =        8.20(Ac.)
Area averaged Fm value =    0.439(In/Hr)
Street flow at end of street =      9.041(CFS)
Half street flow at end of street =      9.041(CFS)
Depth of flow =   0.461(Ft.), Average velocity =   3.091(Ft/s)
Flow width (from curb towards crown)=  16.729(Ft.)


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Process from Point/Station      107.000 to Point/Station      108.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2086.000(Ft.)
End of street segment elevation =  2011.200(Ft.)
Length of street segment  =   760.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
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Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =     13.552(CFS)
Depth of flow =   0.377(Ft.), Average velocity =   8.021(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  12.502(Ft.)
Flow velocity =   8.02(Ft/s)
Travel time =    1.58 min.     TC =   15.75  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.400
Decimal fraction soil group B = 0.600
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 46.40
Adjusted SCS curve number for AMC 3 = 66.40
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.352(In/Hr)
Rainfall intensity =      3.825(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.808
Subarea runoff =      8.936(CFS) for    3.090(Ac.)
Total runoff =     17.978(CFS)
Effective area this stream =        5.82(Ac.)
Total Study Area (Main Stream No. 1) =       11.29(Ac.)
Area averaged Fm value =    0.393(In/Hr)
Street flow at end of street =     17.978(CFS)
Half street flow at end of street =     17.978(CFS)
Depth of flow =   0.407(Ft.), Average velocity =   8.579(Ft/s)
Flow width (from curb towards crown)=  14.031(Ft.)


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Process from Point/Station      108.000 to Point/Station      104.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2003.000(Ft.)
Downstream point/station elevation =  1999.000(Ft.)
Pipe length  =    43.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    17.978(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =    17.978(CFS)
Normal flow depth in pipe =   11.25(In.)
Flow top width inside pipe =   12.99(In.)
Critical depth could not be calculated.
Pipe flow velocity =     18.20(Ft/s)
Travel time through pipe =    0.04 min.
Time of concentration (TC) =    15.79 min.


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Process from Point/Station      108.000 to Point/Station      104.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      5.820(Ac.)
Runoff from this stream =     17.978(CFS)
Time of concentration =   15.79 min.
Rainfall intensity =     3.819(In/Hr)
Area averaged loss rate (Fm) =    0.3930(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     18.18     5.470     14.59    0.380      4.037
2     17.98     5.820     15.79    0.393      3.819
Qmax(1) =
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```
          1.000 *    1.000 *    18.184) +
          1.064 *    0.924 *    17.978) + =      35.847
Qmax(2) =
          0.940 *    1.000 *    18.184) +
          1.000 *    1.000 *    17.978) + =      35.077

Total of 2 streams to confluence:
Flow rates before confluence point:
      18.184      17.978
Maximum flow rates at confluence using above data:
       35.847       35.077
Area of streams before confluence:
        5.470        5.820
Effective area values after confluence:
       10.846       11.290
Results of confluence:
Total flow rate =     35.847(CFS)
Time of concentration =    14.587 min.
Effective stream area after confluence =     10.846(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.387(In/Hr)
Study area total (this main stream) =      11.29(Ac.)


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Process from Point/Station      104.000 to Point/Station      109.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1999.000(Ft.)
Downstream point/station elevation =  1996.500(Ft.)
Pipe length  =   230.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    35.847(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    35.847(CFS)
Normal flow depth in pipe =   21.02(In.)
Flow top width inside pipe =   27.47(In.)
Critical Depth =   24.38(In.)
Pipe flow velocity =      9.76(Ft/s)
Travel time through pipe =    0.39 min.
Time of concentration (TC) =    14.98 min.


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Process from Point/Station      104.000 to Point/Station      109.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     10.846(Ac.)
Runoff from this stream =     35.847(CFS)
Time of concentration =   14.98 min.
Rainfall intensity =     3.962(In/Hr)
Area averaged loss rate (Fm) =    0.3869(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 2


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Process from Point/Station      110.000 to Point/Station      111.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.400
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 41.60
Adjusted SCS curve number for AMC 3 = 61.60
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.394(In/Hr)
Initial subarea data:
Initial area flow distance =   800.000(Ft.)
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Top (of initial area) elevation =  2094.600(Ft.)
Bottom (of initial area) elevation =  2032.000(Ft.)
Difference in elevation =    62.600(Ft.)
Slope =    0.07825  s(%)=       7.82
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.941 min.
Rainfall intensity =      5.279(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.833
Subarea runoff =     18.158(CFS)
Total initial stream area =        4.130(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.394(In/Hr)


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Process from Point/Station      110.000 to Point/Station      111.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      4.130(Ac.)
Runoff from this stream =     18.158(CFS)
Time of concentration =    9.94 min.
Rainfall intensity =     5.279(In/Hr)
Area averaged loss rate (Fm) =    0.3944(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      112.000 to Point/Station      113.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.900
Decimal fraction soil group B = 0.100
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 34.40
Adjusted SCS curve number for AMC 3 = 54.40
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.453(In/Hr)
Initial subarea data:
Initial area flow distance =   800.000(Ft.)
Top (of initial area) elevation =  2094.600(Ft.)
Bottom (of initial area) elevation =  2032.000(Ft.)
Difference in elevation =    62.600(Ft.)
Slope =    0.07825  s(%)=       7.82
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.941 min.
Rainfall intensity =      5.279(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.823
Subarea runoff =     18.114(CFS)
Total initial stream area =        4.170(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.453(In/Hr)


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Process from Point/Station      113.000 to Point/Station      111.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2024.000(Ft.)
Downstream point/station elevation =  2022.000(Ft.)
Pipe length  =    38.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    18.114(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    18.114(CFS)
Normal flow depth in pipe =   11.65(In.)
Flow top width inside pipe =   17.20(In.)
Critical depth could not be calculated.
Pipe flow velocity =     14.97(Ft/s)
Travel time through pipe =    0.04 min.
Time of concentration (TC) =     9.98 min.
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Process from Point/Station      113.000 to Point/Station      111.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      4.170(Ac.)
Runoff from this stream =     18.114(CFS)
Time of concentration =    9.98 min.
Rainfall intensity =     5.264(In/Hr)
Area averaged loss rate (Fm) =    0.4529(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     18.16     4.130      9.94    0.394      5.279
2     18.11     4.170      9.98    0.453      5.264
Qmax(1) =
          1.000 *    1.000 *    18.158) +
          1.003 *    0.996 *    18.114) + =      36.254
Qmax(2) =
          0.997 *    1.000 *    18.158) +
          1.000 *    1.000 *    18.114) + =      36.214

Total of 2 streams to confluence:
Flow rates before confluence point:
      18.158      18.114
Maximum flow rates at confluence using above data:
       36.254       36.214
Area of streams before confluence:
        4.130        4.170
Effective area values after confluence:
        8.282        8.300
Results of confluence:
Total flow rate =     36.254(CFS)
Time of concentration =     9.941 min.
Effective stream area after confluence =      8.282(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.424(In/Hr)
Study area total (this main stream) =       8.30(Ac.)


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Process from Point/Station      111.000 to Point/Station      109.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  2022.000(Ft.)
Downstream point/station elevation =  1996.500(Ft.)
Pipe length  =   244.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    36.254(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    36.254(CFS)
Normal flow depth in pipe =   13.04(In.)
Flow top width inside pipe =   20.37(In.)
Critical depth could not be calculated.
Pipe flow velocity =     23.10(Ft/s)
Travel time through pipe =    0.18 min.
Time of concentration (TC) =    10.12 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      111.000 to Point/Station      109.000
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      8.282(Ac.)
```

```
Runoff from this stream =     36.254(CFS)
Time of concentration =   10.12 min.
Rainfall intensity =     5.215(In/Hr)
Area averaged loss rate (Fm) =    0.4238(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     35.85    10.846     14.98    0.387      3.962
2     36.25     8.282     10.12    0.424      5.215
Qmax(1) =
          1.000 *    1.000 *    35.847) +
          0.739 *    1.000 *    36.254) + =      62.622
Qmax(2) =
          1.350 *    0.675 *    35.847) +
          1.000 *    1.000 *    36.254) + =      68.948

Total of 2 main streams to confluence:
Flow rates before confluence point:
      36.847      37.254
Maximum flow rates at confluence using above data:
       62.622       68.948
Area of streams before confluence:
       10.846        8.282
Effective area values after confluence:
       19.128       15.607


Results of confluence:
Total flow rate =     68.948(CFS)
Time of concentration =    10.117 min.
Effective stream area after confluence  =     15.607(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.403(In/Hr)
Study area total =      19.13(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      109.000 to Point/Station      114.100
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1996.500(Ft.)
Downstream point/station elevation =  1974.000(Ft.)
Pipe length  =  1288.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    68.948(CFS)
Nearest computed pipe diameter  =     33.00(In.)
Calculated individual pipe flow  =    68.948(CFS)
Normal flow depth in pipe =   26.63(In.)
Flow top width inside pipe =   26.06(In.)
Critical Depth =   30.99(In.)
Pipe flow velocity =     13.42(Ft/s)
Travel time through pipe =    1.60 min.
Time of concentration (TC) =    11.72 min.


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Process from Point/Station      109.000 to Point/Station      114.100
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     15.607(Ac.)
Runoff from this stream =     68.948(CFS)
Time of concentration =   11.72 min.
Rainfall intensity =     4.706(In/Hr)
Area averaged loss rate (Fm) =    0.4028(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 2
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Process from Point/Station      126.000 to Point/Station      127.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   500.000(Ft.)
Top (of initial area) elevation =  2031.300(Ft.)
Bottom (of initial area) elevation =  2002.000(Ft.)
Difference in elevation =    29.300(Ft.)
Slope =    0.05860  s(%)=       5.86
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.728 min.
Rainfall intensity =      5.783(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.827
Subarea runoff =      4.303(CFS)
Total initial stream area =        0.900(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


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Process from Point/Station      127.000 to Point/Station      128.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
Top of street segment elevation =  2002.000(Ft.)
End of street segment elevation =  1982.000(Ft.)
Length of street segment  =   850.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      6.437(CFS)
Depth of flow =   0.374(Ft.), Average velocity =   3.895(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  12.353(Ft.)
Flow velocity =   3.90(Ft/s)
Travel time =    3.64 min.     TC =   12.36  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Rainfall intensity =      4.532(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.806
Subarea runoff =      4.176(CFS) for    1.420(Ac.)
Total runoff =      8.479(CFS)
Effective area this stream =        2.32(Ac.)
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Total Study Area (Main Stream No. 2) =       21.91(Ac.)
Area averaged Fm value =    0.471(In/Hr)
Street flow at end of street =      8.479(CFS)
Half street flow at end of street =      8.479(CFS)
Depth of flow =   0.403(Ft.), Average velocity =   4.159(Ft/s)
Flow width (from curb towards crown)=  13.828(Ft.)


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Process from Point/Station      128.000 to Point/Station      114.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------------
Upstream point/station elevation =  1976.000(Ft.)
Downstream point/station elevation =  1974.000(Ft.)
Pipe length  =    35.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     8.479(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     8.479(CFS)
Normal flow depth in pipe =    9.80(In.)
Flow top width inside pipe =    9.29(In.)
Critical depth could not be calculated.
Pipe flow velocity =     12.36(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =    12.41 min.


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Process from Point/Station      128.000 to Point/Station      114.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.320(Ac.)
Runoff from this stream =      8.479(CFS)
Time of concentration =   12.41 min.
Rainfall intensity =     4.520(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 3


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Process from Point/Station      100.000 to Point/Station      129.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   664.000(Ft.)
Top (of initial area) elevation =  2119.000(Ft.)
Bottom (of initial area) elevation =  2044.500(Ft.)
Difference in elevation =    74.500(Ft.)
Slope =    0.11220  s(%)=      11.22
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.586 min.
Rainfall intensity =      5.850(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.828
Subarea runoff =      1.840(CFS)
Total initial stream area =        0.380(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


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Process from Point/Station      129.000 to Point/Station      130.000
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**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
Top of street segment elevation =  2044.500(Ft.)
End of street segment elevation =  1983.000(Ft.)
Length of street segment  =   726.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      2.576(CFS)
Depth of flow =   0.247(Ft.), Average velocity =   5.262(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   6.024(Ft.)
Flow velocity =   5.26(Ft/s)
Travel time =    2.30 min.     TC =   10.88  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Rainfall intensity =      4.955(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.814
Subarea runoff =      1.389(CFS) for    0.420(Ac.)
Total runoff =      3.228(CFS)
Effective area this stream =        0.80(Ac.)
Total Study Area (Main Stream No. 3) =       22.71(Ac.)
Area averaged Fm value =    0.471(In/Hr)
Street flow at end of street =      3.228(CFS)
Half street flow at end of street =      3.228(CFS)
Depth of flow =   0.262(Ft.), Average velocity =   5.496(Ft/s)
Flow width (from curb towards crown)=   6.787(Ft.)


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Process from Point/Station      130.000 to Point/Station      131.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1975.300(Ft.)
Downstream point/station elevation =  1974.300(Ft.)
Pipe length  =    36.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.228(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     3.228(CFS)
Normal flow depth in pipe =    6.30(In.)
Flow top width inside pipe =   11.98(In.)
Critical Depth =    9.23(In.)
Pipe flow velocity =      7.72(Ft/s)
Travel time through pipe =    0.08 min.
Time of concentration (TC) =    10.96 min.


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Process from Point/Station      130.000 to Point/Station      131.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 3 in normal stream number 1
Stream flow area =      0.800(Ac.)
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```
Runoff from this stream =      3.228(CFS)
Time of concentration =   10.96 min.
Rainfall intensity =     4.930(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      118.000 to Point/Station      132.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   875.000(Ft.)
Top (of initial area) elevation =  2056.700(Ft.)
Bottom (of initial area) elevation =  2013.000(Ft.)
Difference in elevation =    43.700(Ft.)
Slope =    0.04994  s(%)=       4.99
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.272 min.
Rainfall intensity =      4.835(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.812
Subarea runoff =     18.145(CFS)
Total initial stream area =        4.620(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


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Process from Point/Station      132.000 to Point/Station      131.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  2013.000(Ft.)
End of street segment elevation =  1983.000(Ft.)
Length of street segment  =   326.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =   5.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =   7.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =     18.192(CFS)
Depth of flow =   0.412(Ft.), Average velocity =   8.387(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  14.291(Ft.)
Flow velocity =   8.39(Ft/s)
Travel time =    0.65 min.     TC =   11.92  min.
 Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
The area added to the existing stream causes a
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a lower flow rate of Q =     18.088(CFS)
therefore the upstream flow rate of Q =     18.145(CFS) is being used
Rainfall intensity =      4.649(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.809
Subarea runoff =      0.000(CFS) for    0.190(Ac.)
Total runoff =     18.145(CFS)
Effective area this stream =        4.81(Ac.)
Total Study Area (Main Stream No. 3) =       27.52(Ac.)
Area averaged Fm value =    0.471(In/Hr)
Street flow at end of street =     18.145(CFS)
Half street flow at end of street =     18.145(CFS)
Depth of flow =   0.412(Ft.), Average velocity =   8.382(Ft/s)
Flow width (from curb towards crown)=  14.277(Ft.)


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Process from Point/Station      132.000 to Point/Station      131.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------------
Along Main Stream number: 3 in normal stream number 2
Stream flow area =      4.810(Ac.)
Runoff from this stream =     18.145(CFS)
Time of concentration =   11.92 min.
Rainfall intensity =     4.649(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1      3.23     0.800     10.96    0.471      4.930
2     18.14     4.810     11.92    0.471      4.649
Qmax(1) =
          1.000 *    1.000 *     3.228) +
          1.067 *    0.920 *    18.145) + =      21.037
Qmax(2) =
          0.937 *    1.000 *     3.228) +
          1.000 *    1.000 *    18.145) + =      21.170

Total of 2 streams to confluence:
Flow rates before confluence point:
       3.228      18.145
Maximum flow rates at confluence using above data:
       21.037       21.170
Area of streams before confluence:
        0.800        4.810
Effective area values after confluence:
        5.224        5.610
Results of confluence:
Total flow rate =     21.170(CFS)
Time of concentration =    11.920 min.
Effective stream area after confluence =      5.610(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.471(In/Hr)
Study area total (this main stream) =       5.61(Ac.)


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Process from Point/Station      131.000 to Point/Station      114.300
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------------
Upstream point/station elevation =  1974.300(Ft.)
Downstream point/station elevation =  1974.000(Ft.)
Pipe length  =    38.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    21.170(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    21.170(CFS)
Normal flow depth in pipe =   17.77(In.)
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Flow top width inside pipe =   25.62(In.)
Critical Depth =   19.32(In.)
Pipe flow velocity =      7.63(Ft/s)
Travel time through pipe =    0.08 min.
Time of concentration (TC) =    12.00 min.


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Process from Point/Station      131.000 to Point/Station      114.300
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      5.610(Ac.)
Runoff from this stream =     21.170(CFS)
Time of concentration =   12.00 min.
Rainfall intensity =     4.627(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Program is now starting with Main Stream No. 4


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Process from Point/Station      112.000 to Point/Station      118.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   909.000(Ft.)
Top (of initial area) elevation =  2094.600(Ft.)
Bottom (of initial area) elevation =  2056.700(Ft.)
Difference in elevation =    37.900(Ft.)
Slope =    0.04169  s(%)=       4.17
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.866 min.
Rainfall intensity =      4.664(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.809
Subarea runoff =     12.340(CFS)
Total initial stream area =        3.270(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


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Process from Point/Station      118.000 to Point/Station      117.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2048.000(Ft.)
Downstream point/station elevation =  2047.400(Ft.)
Pipe length  =    44.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    12.340(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    12.340(CFS)
Normal flow depth in pipe =   12.54(In.)
Flow top width inside pipe =   20.60(In.)
Critical Depth =   15.70(In.)
Pipe flow velocity =      8.24(Ft/s)
Travel time through pipe =    0.09 min.
Time of concentration (TC) =    11.96 min.


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Process from Point/Station      118.000 to Point/Station      117.000
**** CONFLUENCE OF MINOR STREAMS ****
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Along Main Stream number: 4 in normal stream number 1
Stream flow area =      3.270(Ac.)
Runoff from this stream =     12.340(CFS)
Time of concentration =   11.96 min.
Rainfall intensity =     4.640(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


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Process from Point/Station      115.000 to Point/Station      116.000
**** INITIAL AREA EVALUATION ****
----------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   765.000(Ft.)
Top (of initial area) elevation =  2094.200(Ft.)
Bottom (of initial area) elevation =  2056.000(Ft.)
Difference in elevation =    38.200(Ft.)
Slope =    0.04993  s(%)=       4.99
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.683 min.
Rainfall intensity =      5.020(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.816
Subarea runoff =     11.628(CFS)
Total initial stream area =        2.840(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      116.000 to Point/Station      117.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
----------------------------------------------------------------------
Upstream point/station elevation =  2048.000(Ft.)
Downstream point/station elevation =  2047.400(Ft.)
Pipe length  =    31.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    11.628(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    11.628(CFS)
Normal flow depth in pipe =   12.13(In.)
Flow top width inside pipe =   16.88(In.)
Critical Depth =   15.58(In.)
Pipe flow velocity =      9.18(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =    10.74 min.


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Process from Point/Station      116.000 to Point/Station      117.000
**** CONFLUENCE OF MINOR STREAMS ****
----------------------------------------------------------------------
Along Main Stream number: 4 in normal stream number 2
Stream flow area =      2.840(Ac.)
Runoff from this stream =     11.628(CFS)
Time of concentration =   10.74 min.
Rainfall intensity =     5.002(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)
```

```
1     12.34     3.270     11.96    0.471      4.640
2     11.63     2.840     10.74    0.471      5.002
Qmax(1) =
          1.000 *    1.000 *    12.340) +
          0.920 *    1.000 *    11.628) + =      23.039
Qmax(2) =
          1.087 *    0.898 *    12.340) +
          1.000 *    1.000 *    11.628) + =      23.675

Total of 2 streams to confluence:
Flow rates before confluence point:
      12.340      11.628
Maximum flow rates at confluence using above data:
       23.039       23.675
Area of streams before confluence:
        3.270        2.840
Effective area values after confluence:
        6.110        5.777
Results of confluence:
Total flow rate =     23.675(CFS)
Time of concentration =    10.739 min.
Effective stream area after confluence =      5.777(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.471(In/Hr)
Study area total (this main stream) =       6.11(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      117.000 to Point/Station      119.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  2047.400(Ft.)
Downstream point/station elevation =  2036.000(Ft.)
Pipe length  =   477.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    23.675(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    23.675(CFS)
Normal flow depth in pipe =   16.62(In.)
Flow top width inside pipe =   17.07(In.)
Critical depth could not be calculated.
Pipe flow velocity =     11.60(Ft/s)
Travel time through pipe =    0.69 min.
Time of concentration (TC) =    11.42 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      117.000 to Point/Station      119.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 4 in normal stream number 1
Stream flow area =      5.777(Ac.)
Runoff from this stream =     23.675(CFS)
Time of concentration =   11.42 min.
Rainfall intensity =     4.790(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      120.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
```

```
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   586.000(Ft.)
Top (of initial area) elevation =  2116.500(Ft.)
Bottom (of initial area) elevation =  2052.500(Ft.)
Difference in elevation =    64.000(Ft.)
Slope =    0.10922  s(%)=      10.92
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.211 min.
Rainfall intensity =      6.036(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.830
Subarea runoff =      7.061(CFS)
Total initial stream area =        1.410(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      120.000 to Point/Station      119.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2044.500(Ft.)
Downstream point/station elevation =  2036.000(Ft.)
Pipe length  =    93.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.061(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     7.061(CFS)
Normal flow depth in pipe =    7.09(In.)
Flow top width inside pipe =   11.80(In.)
Critical depth could not be calculated.
Pipe flow velocity =     14.63(Ft/s)
Travel time through pipe =    0.11 min.
Time of concentration (TC) =     8.32 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      120.000 to Point/Station      119.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 4 in normal stream number 2
Stream flow area =      1.410(Ac.)
Runoff from this stream =      7.061(CFS)
Time of concentration =    8.32 min.
Rainfall intensity =     5.982(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     23.67     5.777     11.42    0.471      4.790
2      7.06     1.410      8.32    0.471      5.982
Qmax(1) =
          1.000 *    1.000 *    23.675) +
          0.784 *    1.000 *     7.061) + =      29.209
Qmax(2) =
          1.276 *    0.728 *    23.675) +
          1.000 *    1.000 *     7.061) + =      29.053

Total of 2 streams to confluence:
Flow rates before confluence point:
      23.675       7.061
Maximum flow rates at confluence using above data:
       29.209       29.053
Area of streams before confluence:
        5.777        1.410
Effective area values after confluence:
        7.187        5.616
Results of confluence:
```

```
Total flow rate =     29.209(CFS)
Time of concentration =    11.424 min.
Effective stream area after confluence =      7.187(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.471(In/Hr)
Study area total (this main stream) =       7.19(Ac.)


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Process from Point/Station      119.000 to Point/Station      121.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  2036.000(Ft.)
Downstream point/station elevation =  2003.000(Ft.)
Pipe length  =   400.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    29.209(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    29.209(CFS)
Normal flow depth in pipe =   14.25(In.)
Flow top width inside pipe =   14.62(In.)
Critical depth could not be calculated.
Pipe flow velocity =     19.45(Ft/s)
Travel time through pipe =    0.34 min.
Time of concentration (TC) =    11.77 min.


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Process from Point/Station      119.000 to Point/Station      121.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 4 in normal stream number 1
Stream flow area =      7.187(Ac.)
Runoff from this stream =     29.209(CFS)
Time of concentration =   11.77 min.
Rainfall intensity =     4.692(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      124.000 to Point/Station      125.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   972.000(Ft.)
Top (of initial area) elevation =  2032.500(Ft.)
Bottom (of initial area) elevation =  2013.400(Ft.)
Difference in elevation =    19.100(Ft.)
Slope =    0.01965  s(%)=       1.97
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.167 min.
Rainfall intensity =      4.120(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.797
Subarea runoff =      7.980(CFS)
Total initial stream area =        2.430(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


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Process from Point/Station      125.000 to Point/Station      123.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
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```
Upstream point/station elevation =  2005.000(Ft.)
Downstream point/station elevation =  2004.500(Ft.)
Pipe length  =    36.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.980(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =     7.980(CFS)
Normal flow depth in pipe =   10.51(In.)
Flow top width inside pipe =   17.74(In.)
Critical Depth =   13.13(In.)
Pipe flow velocity =      7.44(Ft/s)
Travel time through pipe =    0.08 min.
Time of concentration (TC) =    14.25 min.


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Process from Point/Station      125.000 to Point/Station      123.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Time of concentration =    14.25 min.
Rainfall intensity =      4.104(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.797
Subarea runoff =     12.747(CFS) for    3.910(Ac.)
Total runoff =     20.727(CFS)
Effective area this stream =        6.34(Ac.)
Total Study Area (Main Stream No. 4) =       41.38(Ac.)
Area averaged Fm value =    0.471(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      123.000 to Point/Station      121.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2004.500(Ft.)
Downstream point/station elevation =  2003.000(Ft.)
Pipe length  =    82.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    20.727(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    20.727(CFS)
Normal flow depth in pipe =   16.62(In.)
Flow top width inside pipe =   17.07(In.)
Critical Depth =   19.38(In.)
Pipe flow velocity =     10.15(Ft/s)
Travel time through pipe =    0.13 min.
Time of concentration (TC) =    14.38 min.


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Process from Point/Station      123.000 to Point/Station      121.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 4 in normal stream number 2
Stream flow area =      6.340(Ac.)
Runoff from this stream =     20.727(CFS)
Time of concentration =   14.38 min.
Rainfall intensity =     4.077(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)
```

```
1     29.21     7.187     11.77    0.471      4.692
2     20.73     6.340     14.38    0.471      4.077
Qmax(1) =
          1.000 *    1.000 *    29.209) +
          1.171 *    0.818 *    20.727) + =      49.059
Qmax(2) =
          0.854 *    1.000 *    29.209) +
          1.000 *    1.000 *    20.727) + =      45.680

Total of 2 streams to confluence:
Flow rates before confluence point:
      29.209      20.727
Maximum flow rates at confluence using above data:
       49.059       45.680
Area of streams before confluence:
        7.187        6.340
Effective area values after confluence:
       12.374       13.527
Results of confluence:
Total flow rate =     49.059(CFS)
Time of concentration =    11.767 min.
Effective stream area after confluence =     12.374(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.471(In/Hr)
Study area total (this main stream) =      13.53(Ac.)


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Process from Point/Station      121.000 to Point/Station      114.400
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  2003.000(Ft.)
Downstream point/station elevation =  1974.600(Ft.)
Pipe length  =   265.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    49.059(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    49.059(CFS)
Normal flow depth in pipe =   16.27(In.)
Flow top width inside pipe =   17.55(In.)
Critical depth could not be calculated.
Pipe flow velocity =     24.53(Ft/s)
Travel time through pipe =    0.18 min.
Time of concentration (TC) =    11.95 min.


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Process from Point/Station      121.000 to Point/Station      114.400
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 4
Stream flow area =     12.374(Ac.)
Runoff from this stream =     49.059(CFS)
Time of concentration =   11.95 min.
Rainfall intensity =     4.642(In/Hr)
Area averaged loss rate (Fm) =    0.4711(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     68.95    15.607     11.72    0.403      4.706
2      8.48     2.320     12.41    0.471      4.520
3     21.17     5.610     12.00    0.471      4.627
4     49.06    12.374     11.95    0.471      4.642
Qmax(1) =
          1.000 *    1.000 *    68.948) +
          1.046 *    0.944 *     8.479) +
```

```
          1.019 *    0.976 *    21.170) +
          1.015 *    0.981 *    49.059) + =     147.226
Qmax(2) =
          0.957 *    1.000 *    68.948) +
          1.000 *    1.000 *     8.479) +
          0.974 *    1.000 *    21.170) +
          0.971 *    1.000 *    49.059) + =     142.689
Qmax(3) =
          0.982 *    1.000 *    68.948) +
          1.027 *    0.967 *     8.479) +
          1.000 *    1.000 *    21.170) +
          0.996 *    1.000 *    49.059) + =     146.155
Qmax(4) =
          0.985 *    1.000 *    68.948) +
          1.030 *    0.963 *     8.479) +
          1.004 *    0.995 *    21.170) +
          1.000 *    1.000 *    49.059) + =     146.546

Total of 4 main streams to confluence:
Flow rates before confluence point:
      69.948       9.479      22.170      50.059
Maximum flow rates at confluence using above data:
      147.226      142.689      146.155      146.546
Area of streams before confluence:
       15.607        2.320        5.610       12.374
Effective area values after confluence:
       35.411       35.912       35.835       35.799


Results of confluence:
Total flow rate =    147.226(CFS)
Time of concentration =    11.717 min.
Effective stream area after confluence  =     35.411(Ac.)
Study area average Pervious fraction(Ap) =  0.600
Study area average soil loss rate(Fm) =    0.441(In/Hr)
Study area total =      35.91(Ac.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      121.000 to Point/Station      114.400
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.290(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    143.170(CFS)
therefore the upstream flow rate of Q =    147.226(CFS) is being used
Time of concentration =    11.72 min.
Rainfall intensity =      4.706(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.817
Subarea runoff =      0.000(CFS) for    1.830(Ac.)
Total runoff =    147.226(CFS)
Effective area this stream =       37.24(Ac.)
Total Study Area (Main Stream No. 1) =       43.21(Ac.)
Area averaged Fm value =    0.434(In/Hr)
End of computations, Total Study Area =           43.21 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.617
Area averaged SCS curve number =  37.3
```

Area 'B' – 10 Year - Proposed Condition – Rational Method

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                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/15/24
-----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY RATIONAL
DRAINAGE AREA 'B'
10 YEAR STORM
DECEMBER 15, 2024
-----------------------------------------------------------------------


Program License Serial Number 6407

-----------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


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Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
_______________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Initial subarea data:
Initial area flow distance =   995.000(Ft.)
Top (of initial area) elevation =  2405.000(Ft.)
Bottom (of initial area) elevation =  2151.000(Ft.)
Difference in elevation =   254.000(Ft.)
Slope =    0.25528  s(%)=      25.53
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.912 min.
Rainfall intensity =      3.298(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.790
Subarea runoff =     10.731(CFS)
Total initial stream area =        4.120(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.404(In/Hr)


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Process from Point/Station      201.000 to Point/Station      202.000
**** IMPROVED CHANNEL TRAVEL TIME ****
_______________________________________________________________________
Upstream point elevation =  2151.000(Ft.)
Downstream point elevation =  1081.000(Ft.)
Channel length thru subarea  =   549.000(Ft.)
Channel base width    =   10.000(Ft.)
Slope or 'Z' of left channel bank =   1.000
Slope or 'Z' of right channel bank =   1.000
Estimated mean flow rate at midpoint of channel =     20.145(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    3.000(Ft.)
Flow(q) thru subarea =     20.145(CFS)
Depth of flow =   0.079(Ft.), Average velocity =  25.253(Ft/s)
Channel flow top width =   10.158(Ft.)
```

```
Flow Velocity =   25.25(Ft/s)
Travel time  =    0.36 min.
Time of concentration =   11.27 min.
Critical depth =      0.492(Ft.)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Rainfall intensity =      3.223(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.787
Subarea runoff =     18.729(CFS) for    7.490(Ac.)
Total runoff =     29.460(CFS)
Effective area this stream =       11.61(Ac.)
Total Study Area (Main Stream No. 1) =       11.61(Ac.)
Area averaged Fm value =    0.404(In/Hr)
Depth of flow =   0.099(Ft.), Average velocity =  29.334(Ft/s)
Critical depth =      0.633(Ft.)
End of computations, Total Study Area =           11.61 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

Area 'B' – 100 Year 1 Hour - Proposed Condition – Rational Method

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                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/15/24
------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY RATIONAL
DRAINAGE AREA 'B'
100 YEAR STORM
DECEMBER 15, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


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Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Initial subarea data:
Initial area flow distance =   995.000(Ft.)
Top (of initial area) elevation =  2405.000(Ft.)
Bottom (of initial area) elevation =  2151.000(Ft.)
Difference in elevation =   254.000(Ft.)
Slope =    0.25528  s(%)=      25.53
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.912 min.
Rainfall intensity =      4.946(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.875
Subarea runoff =     17.822(CFS)
Total initial stream area =        4.120(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.140(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  2151.000(Ft.)
Downstream point elevation =  1081.000(Ft.)
Channel length thru subarea  =   549.000(Ft.)
Channel base width    =   10.000(Ft.)
Slope or 'Z' of left channel bank =   1.000
Slope or 'Z' of right channel bank =   1.000
Estimated mean flow rate at midpoint of channel =     33.571(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    3.000(Ft.)
Flow(q) thru subarea =     33.571(CFS)
Depth of flow =   0.108(Ft.), Average velocity =  30.880(Ft/s)
Channel flow top width =   10.215(Ft.)
```

```
Flow Velocity =   30.88(Ft/s)
Travel time  =    0.30 min.
Time of concentration =   11.21 min.
Critical depth =      0.688(Ft.)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Rainfall intensity =      4.854(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.874
Subarea runoff =     31.439(CFS) for    7.490(Ac.)
Total runoff =     49.260(CFS)
Effective area this stream =       11.61(Ac.)
Total Study Area (Main Stream No. 1) =       11.61(Ac.)
Area averaged Fm value =    0.140(In/Hr)
Depth of flow =   0.135(Ft.), Average velocity =  35.889(Ft/s)
Critical depth =      0.883(Ft.)
End of computations, Total Study Area =           11.61 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

Area ‘C’ – 10 Year 1 Hour - Proposed Condition – Rational Method

```
                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY RATIONAL
DRAINAGE AREA 'C'
10 YEAR STORM
DECEMBER 17, 2024
------------------------------------------------------------------------


Program License Serial Number 6407

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
Rational hydrology study storm event year is    10.0
Computed rainfall intensity:
Storm year =    10.00   1 hour rainfall =     1.000 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.587(In/Hr)
Initial subarea data:
Initial area flow distance =   730.000(Ft.)
Top (of initial area) elevation =  2041.000(Ft.)
Bottom (of initial area) elevation =  1965.000(Ft.)
Difference in elevation =    76.000(Ft.)
Slope =    0.10411  s(%)=      10.41
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.052 min.
Rainfall intensity =      3.758(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.760
Subarea runoff =     18.668(CFS)
Total initial stream area =        6.540(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.587(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1957.000(Ft.)
Downstream point/station elevation =  1956.000(Ft.)
Pipe length  =    35.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    18.668(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    18.668(CFS)
Normal flow depth in pipe =   12.91(In.)
Flow top width inside pipe =   20.44(In.)
Critical Depth =   18.77(In.)
Pipe flow velocity =     12.04(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =     9.10 min.
```

```
End of computations, Total Study Area =           6.54 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged SCS curve number =  32.0
```

Area ‘C’ – 100 Year 1 Hour - Proposed Condition – Rational Method

```
                San Bernardino County Rational Hydrology Program

                    (Hydrology Manual Date - August 1986)

 CIVILCADD/CIVILDESIGN  Engineering Software, (c) 1989-2014 Version 9.0
       Rational Hydrology Study        Date: 12/17/24
--------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY RATIONAL
DRAINAGE AREA 'C'
100 YEAR STORM
DECEMBER 17, 2024
--------------------------------------------------------------------------


Program License Serial Number 6407

--------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

--------------------------------------------------------------------------
Rational hydrology study storm event year is   100.0
Computed rainfall intensity:
Storm year =   100.00   1 hour rainfall =     1.500 (In.)
Slope used for rainfall intensity curve b =  0.7000
Soil antecedent moisture condition (AMC) = 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
__________________________________________________________________________
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.6000     Max loss rate(Fm)=     0.471(In/Hr)
Initial subarea data:
Initial area flow distance =   730.000(Ft.)
Top (of initial area) elevation =  2041.000(Ft.)
Bottom (of initial area) elevation =  1965.000(Ft.)
Difference in elevation =    76.000(Ft.)
Slope =    0.10411  s(%)=      10.41
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.052 min.
Rainfall intensity =      5.638(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.825
Subarea runoff =     30.410(CFS)
Total initial stream area =        6.540(Ac.)
Pervious area fraction = 0.600
Initial area Fm value =    0.471(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
__________________________________________________________________________
Upstream point/station elevation =  1957.000(Ft.)
Downstream point/station elevation =  1956.000(Ft.)
Pipe length  =    35.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    30.410(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    30.410(CFS)
Normal flow depth in pipe =   16.17(In.)
Flow top width inside pipe =   22.50(In.)
Critical Depth =   22.41(In.)
Pipe flow velocity =     13.51(Ft/s)
Travel time through pipe =    0.04 min.
Time of concentration (TC) =     9.09 min.
```

```
End of computations, Total Study Area =           6.54 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged SCS curve number =  32.0
```

Area 'D' – 10 Year 1 Hour - Proposed Condition – Rational Method

NO CHANGE FROM EXISTING CONDITION

Area 'D' – 100 Year 1 Hour - Proposed Condition – Rational Method

NO CHANGE FROM EXISTING CONDITION

Area 'E' – 10 Year 1 Hour - Proposed Condition – Rational Method

NO CHANGE FROM EXISTING CONDITION

Area 'E' – 100 Year 1 Hour - Proposed Condition – Rational Method

NO CHANGE FROM EXISTING CONDITION

Area ‘F’ – 10 Year 1 Hour - Proposed Condition – Rational Method

MERGED WITH PROPOSED CONDITION - AREA ‘B’

Area ‘F’ – 100 Year 1 Hour - Proposed Condition – Rational Method

MERGED WITH PROPOSED CONDITION - AREA ‘B’

Area ‘G’ – 10 Year 1 Hour - Proposed Condition – Rational Method

MERGED WITH PROPOSED CONDITION - AREA ‘A’

Area ‘G’ – 100 Year 1 Hour - Proposed Condition – Rational Method

MERGED WITH PROPOSED CONDITION - AREA ‘A’

Attachment 4

Proposed Conditions
Unit Hydrograph Calculations

Area 'A' – 2 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

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              Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
              Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
2 YEAR 24 HOUR STORM
DECEMBER 16, 2024
----------------------------------------------------------------------

       Storm Event Year = 2

       Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
       Sub-Area        Duration        Isohyetal
       (Ac.)            (hours)         (In)
Rainfall data for year 10
           43.08           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
           43.08           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
           43.08          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
           43.08           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
           43.08           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
           43.08          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 36.7      20.4         43.08      1.000     1.000    0.610    0.610

Area-averaged adjusted loss rate Fm (In/Hr) =  0.610

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
26.28	0.610	36.7	20.4	20.00	0.000
16.80	0.390	98.0	98.0	0.20	0.941

Area-averaged catchment yield fraction, Y = 0.367
Area-averaged low loss fraction, Yb = 0.633
User entry of time of concentration = 0.150 (hours)
++
Watershed area = 43.08(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.4444
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.610(In/Hr)
Average low loss rate fraction (Yb) = 0.633 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 43.08(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.308(In)
30-minute factor = 0.998 Adjusted rainfall = 0.527(In)
1-hour factor = 0.998 Adjusted rainfall = 0.649(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 521.00 (CFS))	
1	7.065	36.808
2	47.670	211.553
3	76.988	152.744
4	87.984	57.293
5	94.086	31.790
6	97.295	16.719
7	98.498	6.265
8	99.120	3.241
9	99.604	2.523
10	99.910	1.595
11	100.000	0.467

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3081	0.3081
2	0.3793	0.0712
3	0.4283	0.0491
4	0.4669	0.0386
5	0.4992	0.0323
6	0.5273	0.0281
7	0.5523	0.0250
8	0.5748	0.0226
9	0.5955	0.0207
10	0.6146	0.0191
11	0.6325	0.0178
12	0.6492	0.0167
13	0.6827	0.0335
14	0.7152	0.0325

15	0.7469	0.0317
16	0.7779	0.0309
17	0.8081	0.0302
18	0.8376	0.0296
19	0.8666	0.0289
20	0.8949	0.0284
21	0.9228	0.0279
22	0.9502	0.0274
23	0.9771	0.0269
24	1.0036	0.0265
25	1.0297	0.0261
26	1.0554	0.0257
27	1.0807	0.0253
28	1.1057	0.0250
29	1.1303	0.0247
30	1.1547	0.0243
31	1.1787	0.0240
32	1.2025	0.0238
33	1.2260	0.0235
34	1.2492	0.0232
35	1.2721	0.0230
36	1.2949	0.0227
37	1.3173	0.0224
38	1.3395	0.0222
39	1.3615	0.0220
40	1.3833	0.0218
41	1.4049	0.0216
42	1.4263	0.0214
43	1.4475	0.0212
44	1.4685	0.0210
45	1.4893	0.0208
46	1.5100	0.0207
47	1.5305	0.0205
48	1.5508	0.0203
49	1.5710	0.0202
50	1.5910	0.0200
51	1.6109	0.0199
52	1.6306	0.0197
53	1.6502	0.0196
54	1.6697	0.0195
55	1.6890	0.0193
56	1.7082	0.0192
57	1.7273	0.0191
58	1.7462	0.0189
59	1.7650	0.0188
60	1.7837	0.0187
61	1.8023	0.0186
62	1.8208	0.0185
63	1.8391	0.0184
64	1.8574	0.0183
65	1.8755	0.0181
66	1.8936	0.0180
67	1.9115	0.0179
68	1.9293	0.0178
69	1.9471	0.0177
70	1.9647	0.0176
71	1.9823	0.0176
72	1.9997	0.0175
73	2.0136	0.0138
74	2.0273	0.0137
75	2.0410	0.0137
76	2.0545	0.0136
77	2.0680	0.0135
78	2.0814	0.0134
79	2.0947	0.0133
80	2.1079	0.0132
81	2.1210	0.0131
82	2.1341	0.0131
83	2.1471	0.0130
84	2.1600	0.0129
85	2.1728	0.0128

86	2.1855	0.0127
87	2.1982	0.0127
88	2.2108	0.0126
89	2.2233	0.0125
90	2.2358	0.0125
91	2.2482	0.0124
92	2.2605	0.0123
93	2.2728	0.0123
94	2.2849	0.0122
95	2.2971	0.0121
96	2.3091	0.0121
97	2.3211	0.0120
98	2.3331	0.0119
99	2.3449	0.0119
100	2.3568	0.0118
101	2.3685	0.0118
102	2.3802	0.0117
103	2.3918	0.0116
104	2.4034	0.0116
105	2.4150	0.0115
106	2.4264	0.0115
107	2.4379	0.0114
108	2.4492	0.0114
109	2.4605	0.0113
110	2.4718	0.0113
111	2.4830	0.0112
112	2.4942	0.0112
113	2.5053	0.0111
114	2.5163	0.0111
115	2.5274	0.0110
116	2.5383	0.0110
117	2.5492	0.0109
118	2.5601	0.0109
119	2.5709	0.0108
120	2.5817	0.0108
121	2.5925	0.0107
122	2.6031	0.0107
123	2.6138	0.0106
124	2.6244	0.0106
125	2.6350	0.0106
126	2.6455	0.0105
127	2.6560	0.0105
128	2.6664	0.0104
129	2.6768	0.0104
130	2.6871	0.0104
131	2.6975	0.0103
132	2.7077	0.0103
133	2.7180	0.0102
134	2.7282	0.0102
135	2.7383	0.0102
136	2.7485	0.0101
137	2.7586	0.0101
138	2.7686	0.0101
139	2.7786	0.0100
140	2.7886	0.0100
141	2.7985	0.0099
142	2.8084	0.0099
143	2.8183	0.0099
144	2.8282	0.0098
145	2.8380	0.0098
146	2.8477	0.0098
147	2.8575	0.0097
148	2.8672	0.0097
149	2.8768	0.0097
150	2.8865	0.0096
151	2.8961	0.0096
152	2.9057	0.0096
153	2.9152	0.0095
154	2.9247	0.0095
155	2.9342	0.0095
156	2.9437	0.0095

157	2.9531	0.0094
158	2.9625	0.0094
159	2.9718	0.0094
160	2.9812	0.0093
161	2.9905	0.0093
162	2.9997	0.0093
163	3.0090	0.0092
164	3.0182	0.0092
165	3.0274	0.0092
166	3.0366	0.0092
167	3.0457	0.0091
168	3.0548	0.0091
169	3.0639	0.0091
170	3.0729	0.0091
171	3.0819	0.0090
172	3.0909	0.0090
173	3.0999	0.0090
174	3.1089	0.0089
175	3.1178	0.0089
176	3.1267	0.0089
177	3.1356	0.0089
178	3.1444	0.0088
179	3.1532	0.0088
180	3.1620	0.0088
181	3.1708	0.0088
182	3.1795	0.0087
183	3.1883	0.0087
184	3.1970	0.0087
185	3.2056	0.0087
186	3.2143	0.0087
187	3.2229	0.0086
188	3.2315	0.0086
189	3.2401	0.0086
190	3.2487	0.0086
191	3.2572	0.0085
192	3.2657	0.0085
193	3.2742	0.0085
194	3.2827	0.0085
195	3.2912	0.0085
196	3.2996	0.0084
197	3.3080	0.0084
198	3.3164	0.0084
199	3.3247	0.0084
200	3.3331	0.0083
201	3.3414	0.0083
202	3.3497	0.0083
203	3.3580	0.0083
204	3.3663	0.0083
205	3.3745	0.0082
206	3.3827	0.0082
207	3.3909	0.0082
208	3.3991	0.0082
209	3.4073	0.0082
210	3.4154	0.0081
211	3.4235	0.0081
212	3.4316	0.0081
213	3.4397	0.0081
214	3.4478	0.0081
215	3.4558	0.0080
216	3.4639	0.0080
217	3.4719	0.0080
218	3.4799	0.0080
219	3.4878	0.0080
220	3.4958	0.0080
221	3.5037	0.0079
222	3.5116	0.0079
223	3.5195	0.0079
224	3.5274	0.0079
225	3.5353	0.0079
226	3.5431	0.0078
227	3.5510	0.0078

228	3.5588	0.0078
229	3.5666	0.0078
230	3.5744	0.0078
231	3.5821	0.0078
232	3.5899	0.0077
233	3.5976	0.0077
234	3.6053	0.0077
235	3.6130	0.0077
236	3.6207	0.0077
237	3.6284	0.0077
238	3.6360	0.0076
239	3.6436	0.0076
240	3.6512	0.0076
241	3.6588	0.0076
242	3.6664	0.0076
243	3.6740	0.0076
244	3.6816	0.0076
245	3.6891	0.0075
246	3.6966	0.0075
247	3.7041	0.0075
248	3.7116	0.0075
249	3.7191	0.0075
250	3.7265	0.0075
251	3.7340	0.0074
252	3.7414	0.0074
253	3.7488	0.0074
254	3.7562	0.0074
255	3.7636	0.0074
256	3.7710	0.0074
257	3.7784	0.0074
258	3.7857	0.0073
259	3.7930	0.0073
260	3.8004	0.0073
261	3.8077	0.0073
262	3.8149	0.0073
263	3.8222	0.0073
264	3.8295	0.0073
265	3.8367	0.0072
266	3.8440	0.0072
267	3.8512	0.0072
268	3.8584	0.0072
269	3.8656	0.0072
270	3.8728	0.0072
271	3.8799	0.0072
272	3.8871	0.0072
273	3.8942	0.0071
274	3.9013	0.0071
275	3.9085	0.0071
276	3.9156	0.0071
277	3.9226	0.0071
278	3.9297	0.0071
279	3.9368	0.0071
280	3.9438	0.0070
281	3.9509	0.0070
282	3.9579	0.0070
283	3.9649	0.0070
284	3.9719	0.0070
285	3.9789	0.0070
286	3.9859	0.0070
287	3.9928	0.0070
288	3.9998	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0044	0.0026
2	0.0070	0.0044	0.0026
3	0.0070	0.0044	0.0026
4	0.0070	0.0044	0.0026
5	0.0070	0.0044	0.0026

6	0.0070	0.0045	0.0026
7	0.0071	0.0045	0.0026
8	0.0071	0.0045	0.0026
9	0.0071	0.0045	0.0026
10	0.0071	0.0045	0.0026
11	0.0071	0.0045	0.0026
12	0.0072	0.0045	0.0026
13	0.0072	0.0045	0.0026
14	0.0072	0.0046	0.0026
15	0.0072	0.0046	0.0027
16	0.0072	0.0046	0.0027
17	0.0073	0.0046	0.0027
18	0.0073	0.0046	0.0027
19	0.0073	0.0046	0.0027
20	0.0073	0.0046	0.0027
21	0.0073	0.0046	0.0027
22	0.0074	0.0047	0.0027
23	0.0074	0.0047	0.0027
24	0.0074	0.0047	0.0027
25	0.0074	0.0047	0.0027
26	0.0074	0.0047	0.0027
27	0.0075	0.0047	0.0027
28	0.0075	0.0047	0.0028
29	0.0075	0.0048	0.0028
30	0.0075	0.0048	0.0028
31	0.0076	0.0048	0.0028
32	0.0076	0.0048	0.0028
33	0.0076	0.0048	0.0028
34	0.0076	0.0048	0.0028
35	0.0077	0.0049	0.0028
36	0.0077	0.0049	0.0028
37	0.0077	0.0049	0.0028
38	0.0077	0.0049	0.0028
39	0.0078	0.0049	0.0028
40	0.0078	0.0049	0.0029
41	0.0078	0.0049	0.0029
42	0.0078	0.0050	0.0029
43	0.0079	0.0050	0.0029
44	0.0079	0.0050	0.0029
45	0.0079	0.0050	0.0029
46	0.0079	0.0050	0.0029
47	0.0080	0.0050	0.0029
48	0.0080	0.0051	0.0029
49	0.0080	0.0051	0.0029
50	0.0080	0.0051	0.0030
51	0.0081	0.0051	0.0030
52	0.0081	0.0051	0.0030
53	0.0081	0.0052	0.0030
54	0.0082	0.0052	0.0030
55	0.0082	0.0052	0.0030
56	0.0082	0.0052	0.0030
57	0.0083	0.0052	0.0030
58	0.0083	0.0052	0.0030
59	0.0083	0.0053	0.0031
60	0.0083	0.0053	0.0031
61	0.0084	0.0053	0.0031
62	0.0084	0.0053	0.0031
63	0.0085	0.0053	0.0031
64	0.0085	0.0054	0.0031
65	0.0085	0.0054	0.0031
66	0.0085	0.0054	0.0031
67	0.0086	0.0054	0.0032
68	0.0086	0.0054	0.0032
69	0.0087	0.0055	0.0032
70	0.0087	0.0055	0.0032
71	0.0087	0.0055	0.0032
72	0.0087	0.0055	0.0032
73	0.0088	0.0056	0.0032
74	0.0088	0.0056	0.0032
75	0.0089	0.0056	0.0033
76	0.0089	0.0056	0.0033

77	0.0089	0.0057	0.0033
78	0.0090	0.0057	0.0033
79	0.0090	0.0057	0.0033
80	0.0091	0.0057	0.0033
81	0.0091	0.0058	0.0033
82	0.0091	0.0058	0.0034
83	0.0092	0.0058	0.0034
84	0.0092	0.0058	0.0034
85	0.0093	0.0059	0.0034
86	0.0093	0.0059	0.0034
87	0.0094	0.0059	0.0034
88	0.0094	0.0059	0.0034
89	0.0095	0.0060	0.0035
90	0.0095	0.0060	0.0035
91	0.0095	0.0060	0.0035
92	0.0096	0.0061	0.0035
93	0.0096	0.0061	0.0035
94	0.0097	0.0061	0.0036
95	0.0097	0.0062	0.0036
96	0.0098	0.0062	0.0036
97	0.0098	0.0062	0.0036
98	0.0099	0.0062	0.0036
99	0.0099	0.0063	0.0036
100	0.0100	0.0063	0.0037
101	0.0101	0.0064	0.0037
102	0.0101	0.0064	0.0037
103	0.0102	0.0064	0.0037
104	0.0102	0.0065	0.0037
105	0.0103	0.0065	0.0038
106	0.0103	0.0065	0.0038
107	0.0104	0.0066	0.0038
108	0.0104	0.0066	0.0038
109	0.0105	0.0067	0.0039
110	0.0106	0.0067	0.0039
111	0.0106	0.0067	0.0039
112	0.0107	0.0068	0.0039
113	0.0108	0.0068	0.0040
114	0.0108	0.0069	0.0040
115	0.0109	0.0069	0.0040
116	0.0110	0.0069	0.0040
117	0.0111	0.0070	0.0041
118	0.0111	0.0070	0.0041
119	0.0112	0.0071	0.0041
120	0.0113	0.0071	0.0041
121	0.0114	0.0072	0.0042
122	0.0114	0.0072	0.0042
123	0.0115	0.0073	0.0042
124	0.0116	0.0073	0.0043
125	0.0117	0.0074	0.0043
126	0.0118	0.0074	0.0043
127	0.0119	0.0075	0.0044
128	0.0119	0.0076	0.0044
129	0.0121	0.0076	0.0044
130	0.0121	0.0077	0.0045
131	0.0123	0.0078	0.0045
132	0.0123	0.0078	0.0045
133	0.0125	0.0079	0.0046
134	0.0125	0.0079	0.0046
135	0.0127	0.0080	0.0047
136	0.0127	0.0081	0.0047
137	0.0129	0.0082	0.0047
138	0.0130	0.0082	0.0048
139	0.0131	0.0083	0.0048
140	0.0132	0.0084	0.0049
141	0.0134	0.0085	0.0049
142	0.0135	0.0085	0.0049
143	0.0137	0.0086	0.0050
144	0.0137	0.0087	0.0050
145	0.0175	0.0111	0.0064
146	0.0176	0.0111	0.0064
147	0.0177	0.0112	0.0065

148	0.0178	0.0113	0.0065
149	0.0180	0.0114	0.0066
150	0.0181	0.0115	0.0067
151	0.0184	0.0116	0.0067
152	0.0185	0.0117	0.0068
153	0.0187	0.0118	0.0069
154	0.0188	0.0119	0.0069
155	0.0191	0.0121	0.0070
156	0.0192	0.0121	0.0070
157	0.0195	0.0123	0.0071
158	0.0196	0.0124	0.0072
159	0.0199	0.0126	0.0073
160	0.0200	0.0127	0.0074
161	0.0203	0.0129	0.0075
162	0.0205	0.0130	0.0075
163	0.0208	0.0132	0.0076
164	0.0210	0.0133	0.0077
165	0.0214	0.0135	0.0079
166	0.0216	0.0137	0.0079
167	0.0220	0.0139	0.0081
168	0.0222	0.0141	0.0082
169	0.0227	0.0144	0.0083
170	0.0230	0.0145	0.0084
171	0.0235	0.0149	0.0086
172	0.0238	0.0150	0.0087
173	0.0243	0.0154	0.0089
174	0.0247	0.0156	0.0091
175	0.0253	0.0160	0.0093
176	0.0257	0.0163	0.0094
177	0.0265	0.0168	0.0097
178	0.0269	0.0170	0.0099
179	0.0279	0.0176	0.0102
180	0.0284	0.0180	0.0104
181	0.0296	0.0187	0.0108
182	0.0302	0.0191	0.0111
183	0.0317	0.0201	0.0116
184	0.0325	0.0206	0.0119
185	0.0167	0.0106	0.0061
186	0.0178	0.0113	0.0065
187	0.0207	0.0131	0.0076
188	0.0226	0.0143	0.0083
189	0.0281	0.0178	0.0103
190	0.0323	0.0205	0.0119
191	0.0491	0.0310	0.0180
192	0.0712	0.0451	0.0261
193	0.3081	0.0508	0.2572
194	0.0386	0.0244	0.0142
195	0.0250	0.0158	0.0092
196	0.0191	0.0121	0.0070
197	0.0335	0.0212	0.0123
198	0.0309	0.0196	0.0113
199	0.0289	0.0183	0.0106
200	0.0274	0.0173	0.0100
201	0.0261	0.0165	0.0096
202	0.0250	0.0158	0.0092
203	0.0240	0.0152	0.0088
204	0.0232	0.0147	0.0085
205	0.0224	0.0142	0.0082
206	0.0218	0.0138	0.0080
207	0.0212	0.0134	0.0078
208	0.0207	0.0131	0.0076
209	0.0202	0.0128	0.0074
210	0.0197	0.0125	0.0072
211	0.0193	0.0122	0.0071
212	0.0189	0.0120	0.0070
213	0.0186	0.0118	0.0068
214	0.0183	0.0116	0.0067
215	0.0179	0.0114	0.0066
216	0.0176	0.0112	0.0065
217	0.0138	0.0088	0.0051
218	0.0136	0.0086	0.0050

219	0.0133	0.0084	0.0049
220	0.0131	0.0083	0.0048
221	0.0128	0.0081	0.0047
222	0.0126	0.0080	0.0046
223	0.0124	0.0078	0.0045
224	0.0122	0.0077	0.0045
225	0.0120	0.0076	0.0044
226	0.0118	0.0075	0.0043
227	0.0116	0.0074	0.0043
228	0.0115	0.0073	0.0042
229	0.0113	0.0072	0.0042
230	0.0112	0.0071	0.0041
231	0.0110	0.0070	0.0040
232	0.0109	0.0069	0.0040
233	0.0107	0.0068	0.0039
234	0.0106	0.0067	0.0039
235	0.0105	0.0066	0.0038
236	0.0104	0.0066	0.0038
237	0.0102	0.0065	0.0038
238	0.0101	0.0064	0.0037
239	0.0100	0.0063	0.0037
240	0.0099	0.0063	0.0036
241	0.0098	0.0062	0.0036
242	0.0097	0.0061	0.0036
243	0.0096	0.0061	0.0035
244	0.0095	0.0060	0.0035
245	0.0094	0.0060	0.0035
246	0.0093	0.0059	0.0034
247	0.0092	0.0059	0.0034
248	0.0092	0.0058	0.0034
249	0.0091	0.0057	0.0033
250	0.0090	0.0057	0.0033
251	0.0089	0.0056	0.0033
252	0.0088	0.0056	0.0032
253	0.0088	0.0056	0.0032
254	0.0087	0.0055	0.0032
255	0.0086	0.0055	0.0032
256	0.0086	0.0054	0.0031
257	0.0085	0.0054	0.0031
258	0.0084	0.0053	0.0031
259	0.0084	0.0053	0.0031
260	0.0083	0.0053	0.0030
261	0.0082	0.0052	0.0030
262	0.0082	0.0052	0.0030
263	0.0081	0.0051	0.0030
264	0.0081	0.0051	0.0030
265	0.0080	0.0051	0.0029
266	0.0080	0.0050	0.0029
267	0.0079	0.0050	0.0029
268	0.0078	0.0050	0.0029
269	0.0078	0.0049	0.0029
270	0.0077	0.0049	0.0028
271	0.0077	0.0049	0.0028
272	0.0076	0.0048	0.0028
273	0.0076	0.0048	0.0028
274	0.0076	0.0048	0.0028
275	0.0075	0.0048	0.0028
276	0.0075	0.0047	0.0027
277	0.0074	0.0047	0.0027
278	0.0074	0.0047	0.0027
279	0.0073	0.0046	0.0027
280	0.0073	0.0046	0.0027
281	0.0072	0.0046	0.0027
282	0.0072	0.0046	0.0026
283	0.0072	0.0045	0.0026
284	0.0071	0.0045	0.0026
285	0.0071	0.0045	0.0026
286	0.0070	0.0045	0.0026
287	0.0070	0.0044	0.0026
288	0.0070	0.0044	0.0026

```
      ----------------------------------------------------------------------
      Total soil rain loss =      2.39(In)
      Total effective rainfall =      1.61(In)
      Peak flow rate in flood hydrograph =     60.62(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       17.5      35.0      52.5      70.0
----------------------------------------------------------------------------
  0+ 5       0.0006      0.09  Q         |         |         |         |
  0+10       0.0050      0.63  Q         |         |         |         |
  0+15       0.0121      1.02  Q         |         |         |         |
  0+20       0.0202      1.17  Q         |         |         |         |
  0+25       0.0288      1.26  Q         |         |         |         |
  0+30       0.0378      1.30  Q         |         |         |         |
  0+35       0.0469      1.32  Q         |         |         |         |
  0+40       0.0561      1.34  Q         |         |         |         |
  0+45       0.0654      1.35  Q         |         |         |         |
  0+50       0.0747      1.35  Q         |         |         |         |
  0+55       0.0840      1.36  Q         |         |         |         |
  1+ 0       0.0934      1.36  Q         |         |         |         |
  1+ 5       0.1028      1.37  Q         |         |         |         |
  1+10       0.1122      1.37  Q         |         |         |         |
  1+15       0.1217      1.37  Q         |         |         |         |
  1+20       0.1312      1.38  Q         |         |         |         |
  1+25       0.1407      1.38  Q         |         |         |         |
  1+30       0.1502      1.38  QV        |         |         |         |
  1+35       0.1598      1.39  QV        |         |         |         |
  1+40       0.1694      1.39  QV        |         |         |         |
  1+45       0.1790      1.40  QV        |         |         |         |
  1+50       0.1886      1.40  QV        |         |         |         |
  1+55       0.1983      1.40  QV        |         |         |         |
  2+ 0       0.2080      1.41  QV        |         |         |         |
  2+ 5       0.2177      1.41  QV        |         |         |         |
  2+10       0.2275      1.42  QV        |         |         |         |
  2+15       0.2373      1.42  QV        |         |         |         |
  2+20       0.2471      1.43  QV        |         |         |         |
  2+25       0.2569      1.43  QV        |         |         |         |
  2+30       0.2668      1.43  QV        |         |         |         |
  2+35       0.2767      1.44  QV        |         |         |         |
  2+40       0.2867      1.44  QV        |         |         |         |
  2+45       0.2966      1.45  Q V       |         |         |         |
  2+50       0.3066      1.45  Q V       |         |         |         |
  2+55       0.3167      1.46  Q V       |         |         |         |
  3+ 0       0.3267      1.46  Q V       |         |         |         |
  3+ 5       0.3368      1.47  Q V       |         |         |         |
  3+10       0.3469      1.47  Q V       |         |         |         |
  3+15       0.3571      1.47  Q V       |         |         |         |
  3+20       0.3673      1.48  Q V       |         |         |         |
  3+25       0.3775      1.48  Q V       |         |         |         |
  3+30       0.3878      1.49  Q V       |         |         |         |
  3+35       0.3980      1.49  Q V       |         |         |         |
  3+40       0.4084      1.50  Q V       |         |         |         |
  3+45       0.4187      1.50  Q V       |         |         |         |
  3+50       0.4291      1.51  Q V       |         |         |         |
  3+55       0.4396      1.51  Q  V      |         |         |         |
  4+ 0       0.4500      1.52  Q  V      |         |         |         |
  4+ 5       0.4605      1.52  Q  V      |         |         |         |
  4+10       0.4711      1.53  Q  V      |         |         |         |
  4+15       0.4816      1.53  Q  V      |         |         |         |
  4+20       0.4922      1.54  Q  V      |         |         |         |
  4+25       0.5029      1.55  Q  V      |         |         |         |
  4+30       0.5136      1.55  Q  V      |         |         |         |
  4+35       0.5243      1.56  Q  V      |         |         |         |
  4+40       0.5350      1.56  Q  V      |         |         |         |
  4+45       0.5458      1.57  Q  V      |         |         |         |
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 4+50      0.5567     1.57  Q  V      |         |         |         |
 4+55      0.5676     1.58  Q  V      |         |         |         |
 5+ 0      0.5785     1.59  Q  V      |         |         |         |
 5+ 5      0.5894     1.59  Q   V     |         |         |         |
 5+10      0.6004     1.60  Q   V     |         |         |         |
 5+15      0.6115     1.60  Q   V     |         |         |         |
 5+20      0.6226     1.61  Q   V     |         |         |         |
 5+25      0.6337     1.62  Q   V     |         |         |         |
 5+30      0.6449     1.62  Q   V     |         |         |         |
 5+35      0.6561     1.63  Q   V     |         |         |         |
 5+40      0.6674     1.63  Q   V     |         |         |         |
 5+45      0.6787     1.64  Q   V     |         |         |         |
 5+50      0.6900     1.65  Q   V     |         |         |         |
 5+55      0.7014     1.65  Q   V     |         |         |         |
 6+ 0      0.7128     1.66  Q   V     |         |         |         |
 6+ 5      0.7243     1.67  Q    V    |         |         |         |
 6+10      0.7359     1.68  Q    V    |         |         |         |
 6+15      0.7474     1.68  Q    V    |         |         |         |
 6+20      0.7591     1.69  Q    V    |         |         |         |
 6+25      0.7708     1.70  Q    V    |         |         |         |
 6+30      0.7825     1.70  Q    V    |         |         |         |
 6+35      0.7943     1.71  Q    V    |         |         |         |
 6+40      0.8061     1.72  Q    V    |         |         |         |
 6+45      0.8180     1.73  Q    V    |         |         |         |
 6+50      0.8299     1.73  Q    V    |         |         |         |
 6+55      0.8419     1.74  Q    V    |         |         |         |
 7+ 0      0.8540     1.75  Q    V    |         |         |         |
 7+ 5      0.8661     1.76  |Q   V    |         |         |         |
 7+10      0.8782     1.77  |Q    V   |         |         |         |
 7+15      0.8904     1.77  |Q    V   |         |         |         |
 7+20      0.9027     1.78  |Q    V   |         |         |         |
 7+25      0.9150     1.79  |Q    V   |         |         |         |
 7+30      0.9274     1.80  |Q    V   |         |         |         |
 7+35      0.9399     1.81  |Q    V   |         |         |         |
 7+40      0.9524     1.82  |Q    V   |         |         |         |
 7+45      0.9649     1.82  |Q    V   |         |         |         |
 7+50      0.9776     1.83  |Q    V   |         |         |         |
 7+55      0.9902     1.84  |Q    V   |         |         |         |
 8+ 0      1.0030     1.85  |Q    V   |         |         |         |
 8+ 5      1.0158     1.86  |Q     V  |         |         |         |
 8+10      1.0287     1.87  |Q     V  |         |         |         |
 8+15      1.0417     1.88  |Q     V  |         |         |         |
 8+20      1.0547     1.89  |Q     V  |         |         |         |
 8+25      1.0678     1.90  |Q     V  |         |         |         |
 8+30      1.0809     1.91  |Q     V  |         |         |         |
 8+35      1.0942     1.92  |Q     V  |         |         |         |
 8+40      1.1075     1.93  |Q     V  |         |         |         |
 8+45      1.1209     1.94  |Q     V  |         |         |         |
 8+50      1.1343     1.95  |Q     V  |         |         |         |
 8+55      1.1479     1.96  |Q     V  |         |         |         |
 9+ 0      1.1615     1.98  |Q      V |         |         |         |
 9+ 5      1.1752     1.99  |Q      V |         |         |         |
 9+10      1.1889     2.00  |Q      V |         |         |         |
 9+15      1.2028     2.01  |Q      V |         |         |         |
 9+20      1.2167     2.02  |Q      V |         |         |         |
 9+25      1.2307     2.04  |Q      V |         |         |         |
 9+30      1.2448     2.05  |Q      V |         |         |         |
 9+35      1.2590     2.06  |Q      V |         |         |         |
 9+40      1.2733     2.07  |Q      V |         |         |         |
 9+45      1.2877     2.09  |Q      V |         |         |         |
 9+50      1.3022     2.10  |Q       V|         |         |         |
 9+55      1.3167     2.11  |Q       V|         |         |         |
10+ 0      1.3314     2.13  |Q       V|         |         |         |
10+ 5      1.3461     2.14  |Q       V|         |         |         |
10+10      1.3610     2.16  |Q       V|         |         |         |
10+15      1.3760     2.17  |Q       V|         |         |         |
10+20      1.3910     2.19  |Q       V|         |         |         |
10+25      1.4062     2.20  |Q       V|         |         |         |
10+30      1.4215     2.22  |Q       V|         |         |         |
10+35      1.4369     2.24  |Q       V|         |         |         |
10+40      1.4524     2.25  |Q        V         |         |         |
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10+45      1.4681     2.27  |Q        V         |         |         |
10+50      1.4838     2.29  |Q        V         |         |         |
10+55      1.4997     2.31  |Q        V         |         |         |
11+ 0      1.5157     2.32  |Q        V         |         |         |
11+ 5      1.5318     2.34  |Q        V         |         |         |
11+10      1.5481     2.36  |Q        V         |         |         |
11+15      1.5645     2.38  |Q        V         |         |         |
11+20      1.5810     2.40  |Q        V         |         |         |
11+25      1.5977     2.42  |Q        |V        |         |         |
11+30      1.6146     2.44  |Q        |V        |         |         |
11+35      1.6315     2.46  |Q        |V        |         |         |
11+40      1.6487     2.49  |Q        |V        |         |         |
11+45      1.6660     2.51  |Q        |V        |         |         |
11+50      1.6834     2.54  |Q        |V        |         |         |
11+55      1.7010     2.56  |Q        |V        |         |         |
12+ 0      1.7188     2.58  |Q        |V        |         |         |
12+ 5      1.7371     2.66  |Q        | V       |         |         |
12+10      1.7575     2.96  |Q        | V       |         |         |
12+15      1.7794     3.18  |Q        | V       |         |         |
12+20      1.8020     3.28  |Q        | V       |         |         |
12+25      1.8251     3.35  |Q        | V       |         |         |
12+30      1.8485     3.40  |Q        | V       |         |         |
12+35      1.8722     3.44  |Q        | V       |         |         |
12+40      1.8961     3.47  |Q        |  V      |         |         |
12+45      1.9203     3.51  | Q       |  V      |         |         |
12+50      1.9447     3.54  | Q       |  V      |         |         |
12+55      1.9693     3.57  | Q       |  V      |         |         |
13+ 0      1.9941     3.61  | Q       |  V      |         |         |
13+ 5      2.0192     3.64  | Q       |  V      |         |         |
13+10      2.0446     3.68  | Q       |   V     |         |         |
13+15      2.0702     3.72  | Q       |   V     |         |         |
13+20      2.0961     3.76  | Q       |   V     |         |         |
13+25      2.1223     3.80  | Q       |   V     |         |         |
13+30      2.1487     3.84  | Q       |   V     |         |         |
13+35      2.1755     3.89  | Q       |    V    |         |         |
13+40      2.2026     3.94  | Q       |    V    |         |         |
13+45      2.2300     3.98  | Q       |    V    |         |         |
13+50      2.2578     4.04  | Q       |    V    |         |         |
13+55      2.2860     4.09  | Q       |    V    |         |         |
14+ 0      2.3145     4.15  | Q       |     V   |         |         |
14+ 5      2.3435     4.20  | Q       |     V   |         |         |
14+10      2.3729     4.27  | Q       |     V   |         |         |
14+15      2.4028     4.34  | Q       |     V   |         |         |
14+20      2.4332     4.41  | Q       |     V   |         |         |
14+25      2.4641     4.49  | Q       |      V  |         |         |
14+30      2.4956     4.57  | Q       |      V  |         |         |
14+35      2.5276     4.65  | Q       |      V  |         |         |
14+40      2.5603     4.75  | Q       |      V  |         |         |
14+45      2.5937     4.84  | Q       |      V  |         |         |
14+50      2.6278     4.95  | Q       |       V |         |         |
14+55      2.6626     5.06  | Q       |       V |         |         |
15+ 0      2.6984     5.19  | Q       |       V |         |         |
15+ 5      2.7351     5.33  |  Q      |       V |         |         |
15+10      2.7729     5.49  |  Q      |        V|         |         |
15+15      2.8118     5.65  |  Q      |        V|         |         |
15+20      2.8522     5.86  |  Q      |        V|         |         |
15+25      2.8923     5.83  |  Q      |        V|         |         |
15+30      2.9247     4.71  | Q       |         V         |         |
15+35      2.9522     3.99  | Q       |         V         |         |
15+40      2.9796     3.99  | Q       |         V         |         |
15+45      3.0087     4.22  | Q       |         V         |         |
15+50      3.0417     4.79  | Q       |         |V        |         |
15+55      3.0810     5.70  |  Q      |         |V        |         |
16+ 0      3.1339     7.68  |   Q     |         |V        |         |
16+ 5      3.2647    19.00  |         Q         | V       |         |
16+10      3.6822    60.62  |         |         |    V    |   Q     |
16+15      3.9923    45.02  |         |         |    Q V  |         |
16+20      4.1326    20.37  |         |Q        |       V |         |
16+25      4.2218    12.96  |       Q |         |         V|         |
16+30      4.2882     9.64  |     Q   |         |         V|         |
16+35      4.3389     7.37  |   Q     |         |         V|         |
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16+40       4.3834      6.46  |  Q       |          |          V          |
16+45       4.4251      6.06  |  Q       |          |          V          |
16+50       4.4637      5.61  |  Q       |          |          V          |
16+55       4.4988      5.10  | Q        |          |          |V         |
17+ 0       4.5317      4.78  | Q        |          |          |V         |
17+ 5       4.5634      4.60  | Q        |          |          |V         |
17+10       4.5940      4.44  | Q        |          |          |V         |
17+15       4.6237      4.30  | Q        |          |          |V         |
17+20       4.6524      4.17  | Q        |          |          | V        |
17+25       4.6804      4.06  | Q        |          |          | V        |
17+30       4.7076      3.96  | Q        |          |          | V        |
17+35       4.7342      3.86  | Q        |          |          | V        |
17+40       4.7602      3.78  | Q        |          |          | V        |
17+45       4.7857      3.70  | Q        |          |          |  V       |
17+50       4.8106      3.62  | Q        |          |          |  V       |
17+55       4.8351      3.55  | Q        |          |          |  V       |
18+ 0       4.8591      3.49  |Q         |          |          |  V       |
18+ 5       4.8824      3.38  |Q         |          |          |  V       |
18+10       4.9034      3.05  |Q         |          |          |  V       |
18+15       4.9227      2.80  |Q         |          |          |   V      |
18+20       4.9411      2.67  |Q         |          |          |   V      |
18+25       4.9589      2.58  |Q         |          |          |   V      |
18+30       4.9762      2.51  |Q         |          |          |   V      |
18+35       4.9932      2.46  |Q         |          |          |   V      |
18+40       5.0098      2.41  |Q         |          |          |   V      |
18+45       5.0261      2.37  |Q         |          |          |   V      |
18+50       5.0422      2.33  |Q         |          |          |   V      |
18+55       5.0580      2.29  |Q         |          |          |   V      |
19+ 0       5.0735      2.26  |Q         |          |          |    V     |
19+ 5       5.0889      2.23  |Q         |          |          |    V     |
19+10       5.1040      2.19  |Q         |          |          |    V     |
19+15       5.1189      2.16  |Q         |          |          |    V     |
19+20       5.1336      2.13  |Q         |          |          |    V     |
19+25       5.1481      2.11  |Q         |          |          |    V     |
19+30       5.1624      2.08  |Q         |          |          |    V     |
19+35       5.1765      2.05  |Q         |          |          |    V     |
19+40       5.1905      2.03  |Q         |          |          |    V     |
19+45       5.2043      2.00  |Q         |          |          |    V     |
19+50       5.2179      1.98  |Q         |          |          |     V    |
19+55       5.2314      1.96  |Q         |          |          |     V    |
20+ 0       5.2447      1.94  |Q         |          |          |     V    |
20+ 5       5.2579      1.91  |Q         |          |          |     V    |
20+10       5.2709      1.89  |Q         |          |          |     V    |
20+15       5.2838      1.87  |Q         |          |          |     V    |
20+20       5.2966      1.86  |Q         |          |          |     V    |
20+25       5.3093      1.84  |Q         |          |          |     V    |
20+30       5.3218      1.82  |Q         |          |          |     V    |
20+35       5.3342      1.80  |Q         |          |          |     V    |
20+40       5.3465      1.78  |Q         |          |          |     V    |
20+45       5.3586      1.77  |Q         |          |          |      V   |
20+50       5.3707      1.75  |Q         |          |          |      V   |
20+55       5.3827      1.74  Q          |          |          |      V   |
21+ 0       5.3945      1.72  Q          |          |          |      V   |
21+ 5       5.4063      1.71  Q          |          |          |      V   |
21+10       5.4179      1.69  Q          |          |          |      V   |
21+15       5.4295      1.68  Q          |          |          |      V   |
21+20       5.4409      1.66  Q          |          |          |      V   |
21+25       5.4523      1.65  Q          |          |          |      V   |
21+30       5.4635      1.64  Q          |          |          |      V   |
21+35       5.4747      1.62  Q          |          |          |      V   |
21+40       5.4858      1.61  Q          |          |          |      V   |
21+45       5.4968      1.60  Q          |          |          |       V  |
21+50       5.5078      1.59  Q          |          |          |       V  |
21+55       5.5186      1.58  Q          |          |          |       V  |
22+ 0       5.5294      1.56  Q          |          |          |       V  |
22+ 5       5.5401      1.55  Q          |          |          |       V  |
22+10       5.5507      1.54  Q          |          |          |       V  |
22+15       5.5613      1.53  Q          |          |          |       V  |
22+20       5.5717      1.52  Q          |          |          |       V  |
22+25       5.5821      1.51  Q          |          |          |       V  |
22+30       5.5925      1.50  Q          |          |          |       V  |
```

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   22+35       5.6027      1.49  Q         |         |         |       V |
   22+40       5.6129      1.48  Q         |         |         |       V |
   22+45       5.6231      1.47  Q         |         |         |       V |
   22+50       5.6331      1.46  Q         |         |         |       V |
   22+55       5.6431      1.45  Q         |         |         |        V|
   23+ 0       5.6531      1.44  Q         |         |         |        V|
   23+ 5       5.6630      1.44  Q         |         |         |        V|
   23+10       5.6728      1.43  Q         |         |         |        V|
   23+15       5.6826      1.42  Q         |         |         |        V|
   23+20       5.6923      1.41  Q         |         |         |        V|
   23+25       5.7019      1.40  Q         |         |         |        V|
   23+30       5.7115      1.39  Q         |         |         |        V|
   23+35       5.7211      1.39  Q         |         |         |        V|
   23+40       5.7305      1.38  Q         |         |         |        V|
   23+45       5.7400      1.37  Q         |         |         |        V|
   23+50       5.7494      1.36  Q         |         |         |        V|
   23+55       5.7587      1.36  Q         |         |         |        V|
   24+ 0       5.7680      1.35  Q         |         |         |        V|
   24+ 5       5.7766      1.25  Q         |         |         |        V|
   24+10       5.7814      0.70  Q         |         |         |        V|
   24+15       5.7835      0.31  Q         |         |         |        V|
   24+20       5.7846      0.16  Q         |         |         |        V|
   24+25       5.7852      0.08  Q         |         |         |        V|
   24+30       5.7854      0.04  Q         |         |         |        V|
   24+35       5.7856      0.02  Q         |         |         |        V|
   24+40       5.7856      0.01  Q         |         |         |        V|
   24+45       5.7857      0.01  Q         |         |         |        V|
   24+50       5.7857      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'A' – 5 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
5 YEAR 24 HOUR STORM
DECEMBER 16, 2024
------------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            43.08           1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            43.08           6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            43.08          24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            43.08           1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            43.08           6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            43.08          24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 36.7      20.4         43.08      1.000     1.000    0.610    0.610

Area-averaged adjusted loss rate Fm (In/Hr) =  0.610

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
26.28	0.610	36.7	20.4	29.37	0.000
16.80	0.390	98.0	98.0	0.20	0.959

Area-averaged catchment yield fraction, Y = 0.374
Area-averaged low loss fraction, Yb = 0.626
User entry of time of concentration = 0.150 (hours)
++
Watershed area = 43.08(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.4444
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.610(In/Hr)
Average low loss rate fraction (Yb) = 0.626 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 43.08(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.402(In)
30-minute factor = 0.998 Adjusted rainfall = 0.689(In)
1-hour factor = 0.998 Adjusted rainfall = 0.848(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.585(In)
24-hour factor = 1.000 Adjusted rainfall = 5.873(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 521.00 (CFS))	
1	7.065	36.808
2	47.670	211.553
3	76.988	152.744
4	87.984	57.293
5	94.086	31.790
6	97.295	16.719
7	98.498	6.265
8	99.120	3.241
9	99.604	2.523
10	99.910	1.595
11	100.000	0.467

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4023	0.4023
2	0.4953	0.0930
3	0.5593	0.0641
4	0.6097	0.0504
5	0.6520	0.0422
6	0.6886	0.0367
7	0.7212	0.0326
8	0.7507	0.0295
9	0.7777	0.0270
10	0.8026	0.0250
11	0.8259	0.0233
12	0.8478	0.0218
13	0.8911	0.0433
14	0.9332	0.0421

15	0.9742	0.0410
16	1.0141	0.0400
17	1.0532	0.0390
18	1.0913	0.0382
19	1.1287	0.0374
20	1.1653	0.0366
21	1.2013	0.0360
22	1.2366	0.0353
23	1.2713	0.0347
24	1.3055	0.0341
25	1.3391	0.0336
26	1.3722	0.0331
27	1.4048	0.0326
28	1.4370	0.0322
29	1.4688	0.0318
30	1.5001	0.0313
31	1.5311	0.0310
32	1.5616	0.0306
33	1.5919	0.0302
34	1.6217	0.0299
35	1.6513	0.0295
36	1.6805	0.0292
37	1.7094	0.0289
38	1.7379	0.0286
39	1.7662	0.0283
40	1.7942	0.0280
41	1.8219	0.0277
42	1.8494	0.0275
43	1.8767	0.0272
44	1.9037	0.0270
45	1.9304	0.0268
46	1.9570	0.0265
47	1.9833	0.0263
48	2.0094	0.0261
49	2.0354	0.0259
50	2.0611	0.0257
51	2.0866	0.0255
52	2.1119	0.0253
53	2.1371	0.0251
54	2.1620	0.0250
55	2.1868	0.0248
56	2.2114	0.0246
57	2.2359	0.0245
58	2.2602	0.0243
59	2.2843	0.0241
60	2.3083	0.0240
61	2.3321	0.0238
62	2.3558	0.0237
63	2.3794	0.0235
64	2.4028	0.0234
65	2.4260	0.0233
66	2.4491	0.0231
67	2.4721	0.0230
68	2.4950	0.0229
69	2.5177	0.0227
70	2.5404	0.0226
71	2.5628	0.0225
72	2.5852	0.0224
73	2.6064	0.0212
74	2.6275	0.0211
75	2.6484	0.0210
76	2.6693	0.0208
77	2.6900	0.0207
78	2.7107	0.0206
79	2.7312	0.0205
80	2.7516	0.0204
81	2.7719	0.0203
82	2.7921	0.0202
83	2.8122	0.0201
84	2.8322	0.0200
85	2.8521	0.0199

86	2.8719	0.0198
87	2.8917	0.0197
88	2.9113	0.0196
89	2.9308	0.0195
90	2.9503	0.0194
91	2.9696	0.0194
92	2.9889	0.0193
93	3.0081	0.0192
94	3.0272	0.0191
95	3.0462	0.0190
96	3.0652	0.0189
97	3.0840	0.0189
98	3.1028	0.0188
99	3.1215	0.0187
100	3.1402	0.0186
101	3.1587	0.0186
102	3.1772	0.0185
103	3.1956	0.0184
104	3.2139	0.0183
105	3.2322	0.0183
106	3.2504	0.0182
107	3.2685	0.0181
108	3.2865	0.0180
109	3.3045	0.0180
110	3.3224	0.0179
111	3.3403	0.0178
112	3.3580	0.0178
113	3.3758	0.0177
114	3.3934	0.0177
115	3.4110	0.0176
116	3.4285	0.0175
117	3.4460	0.0175
118	3.4634	0.0174
119	3.4807	0.0173
120	3.4980	0.0173
121	3.5153	0.0172
122	3.5324	0.0172
123	3.5495	0.0171
124	3.5666	0.0171
125	3.5836	0.0170
126	3.6005	0.0169
127	3.6174	0.0169
128	3.6343	0.0168
129	3.6510	0.0168
130	3.6678	0.0167
131	3.6844	0.0167
132	3.7011	0.0166
133	3.7176	0.0166
134	3.7342	0.0165
135	3.7506	0.0165
136	3.7670	0.0164
137	3.7834	0.0164
138	3.7997	0.0163
139	3.8160	0.0163
140	3.8322	0.0162
141	3.8484	0.0162
142	3.8646	0.0161
143	3.8806	0.0161
144	3.8967	0.0160
145	3.9127	0.0160
146	3.9286	0.0160
147	3.9445	0.0159
148	3.9604	0.0159
149	3.9762	0.0158
150	3.9920	0.0158
151	4.0077	0.0157
152	4.0234	0.0157
153	4.0391	0.0156
154	4.0547	0.0156
155	4.0702	0.0156
156	4.0858	0.0155

157	4.1013	0.0155
158	4.1167	0.0154
159	4.1321	0.0154
160	4.1475	0.0154
161	4.1628	0.0153
162	4.1781	0.0153
163	4.1933	0.0152
164	4.2085	0.0152
165	4.2237	0.0152
166	4.2388	0.0151
167	4.2539	0.0151
168	4.2690	0.0151
169	4.2840	0.0150
170	4.2990	0.0150
171	4.3140	0.0150
172	4.3289	0.0149
173	4.3438	0.0149
174	4.3586	0.0148
175	4.3734	0.0148
176	4.3882	0.0148
177	4.4029	0.0147
178	4.4176	0.0147
179	4.4323	0.0147
180	4.4470	0.0146
181	4.4616	0.0146
182	4.4761	0.0146
183	4.4907	0.0145
184	4.5052	0.0145
185	4.5197	0.0145
186	4.5341	0.0144
187	4.5485	0.0144
188	4.5629	0.0144
189	4.5773	0.0144
190	4.5916	0.0143
191	4.6059	0.0143
192	4.6201	0.0143
193	4.6344	0.0142
194	4.6486	0.0142
195	4.6627	0.0142
196	4.6769	0.0141
197	4.6910	0.0141
198	4.7051	0.0141
199	4.7191	0.0141
200	4.7331	0.0140
201	4.7471	0.0140
202	4.7611	0.0140
203	4.7750	0.0139
204	4.7890	0.0139
205	4.8028	0.0139
206	4.8167	0.0139
207	4.8305	0.0138
208	4.8443	0.0138
209	4.8581	0.0138
210	4.8718	0.0137
211	4.8856	0.0137
212	4.8993	0.0137
213	4.9129	0.0137
214	4.9266	0.0136
215	4.9402	0.0136
216	4.9538	0.0136
217	4.9673	0.0136
218	4.9809	0.0135
219	4.9944	0.0135
220	5.0079	0.0135
221	5.0213	0.0135
222	5.0348	0.0134
223	5.0482	0.0134
224	5.0616	0.0134
225	5.0749	0.0134
226	5.0883	0.0133
227	5.1016	0.0133

228	5.1149	0.0133
229	5.1282	0.0133
230	5.1414	0.0132
231	5.1546	0.0132
232	5.1678	0.0132
233	5.1810	0.0132
234	5.1941	0.0132
235	5.2073	0.0131
236	5.2204	0.0131
237	5.2335	0.0131
238	5.2465	0.0131
239	5.2596	0.0130
240	5.2726	0.0130
241	5.2856	0.0130
242	5.2985	0.0130
243	5.3115	0.0130
244	5.3244	0.0129
245	5.3373	0.0129
246	5.3502	0.0129
247	5.3631	0.0129
248	5.3759	0.0128
249	5.3887	0.0128
250	5.4015	0.0128
251	5.4143	0.0128
252	5.4271	0.0128
253	5.4398	0.0127
254	5.4525	0.0127
255	5.4652	0.0127
256	5.4779	0.0127
257	5.4906	0.0127
258	5.5032	0.0126
259	5.5158	0.0126
260	5.5284	0.0126
261	5.5410	0.0126
262	5.5536	0.0126
263	5.5661	0.0125
264	5.5786	0.0125
265	5.5911	0.0125
266	5.6036	0.0125
267	5.6160	0.0125
268	5.6285	0.0124
269	5.6409	0.0124
270	5.6533	0.0124
271	5.6657	0.0124
272	5.6781	0.0124
273	5.6904	0.0123
274	5.7027	0.0123
275	5.7151	0.0123
276	5.7274	0.0123
277	5.7396	0.0123
278	5.7519	0.0123
279	5.7641	0.0122
280	5.7763	0.0122
281	5.7885	0.0122
282	5.8007	0.0122
283	5.8129	0.0122
284	5.8250	0.0122
285	5.8372	0.0121
286	5.8493	0.0121
287	5.8614	0.0121
288	5.8735	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0076	0.0045
2	0.0121	0.0076	0.0045
3	0.0121	0.0076	0.0045
4	0.0122	0.0076	0.0045
5	0.0122	0.0076	0.0046

6	0.0122	0.0076	0.0046
7	0.0122	0.0077	0.0046
8	0.0123	0.0077	0.0046
9	0.0123	0.0077	0.0046
10	0.0123	0.0077	0.0046
11	0.0123	0.0077	0.0046
12	0.0124	0.0077	0.0046
13	0.0124	0.0078	0.0046
14	0.0124	0.0078	0.0046
15	0.0125	0.0078	0.0047
16	0.0125	0.0078	0.0047
17	0.0125	0.0078	0.0047
18	0.0125	0.0078	0.0047
19	0.0126	0.0079	0.0047
20	0.0126	0.0079	0.0047
21	0.0126	0.0079	0.0047
22	0.0127	0.0079	0.0047
23	0.0127	0.0079	0.0048
24	0.0127	0.0080	0.0048
25	0.0128	0.0080	0.0048
26	0.0128	0.0080	0.0048
27	0.0128	0.0080	0.0048
28	0.0128	0.0080	0.0048
29	0.0129	0.0081	0.0048
30	0.0129	0.0081	0.0048
31	0.0130	0.0081	0.0048
32	0.0130	0.0081	0.0049
33	0.0130	0.0081	0.0049
34	0.0130	0.0082	0.0049
35	0.0131	0.0082	0.0049
36	0.0131	0.0082	0.0049
37	0.0132	0.0082	0.0049
38	0.0132	0.0082	0.0049
39	0.0132	0.0083	0.0049
40	0.0132	0.0083	0.0050
41	0.0133	0.0083	0.0050
42	0.0133	0.0083	0.0050
43	0.0134	0.0084	0.0050
44	0.0134	0.0084	0.0050
45	0.0134	0.0084	0.0050
46	0.0135	0.0084	0.0050
47	0.0135	0.0085	0.0051
48	0.0135	0.0085	0.0051
49	0.0136	0.0085	0.0051
50	0.0136	0.0085	0.0051
51	0.0137	0.0086	0.0051
52	0.0137	0.0086	0.0051
53	0.0137	0.0086	0.0051
54	0.0138	0.0086	0.0052
55	0.0138	0.0087	0.0052
56	0.0139	0.0087	0.0052
57	0.0139	0.0087	0.0052
58	0.0139	0.0087	0.0052
59	0.0140	0.0088	0.0052
60	0.0140	0.0088	0.0052
61	0.0141	0.0088	0.0053
62	0.0141	0.0088	0.0053
63	0.0142	0.0089	0.0053
64	0.0142	0.0089	0.0053
65	0.0143	0.0089	0.0053
66	0.0143	0.0089	0.0053
67	0.0144	0.0090	0.0054
68	0.0144	0.0090	0.0054
69	0.0144	0.0090	0.0054
70	0.0145	0.0091	0.0054
71	0.0145	0.0091	0.0054
72	0.0146	0.0091	0.0055
73	0.0146	0.0092	0.0055
74	0.0147	0.0092	0.0055
75	0.0147	0.0092	0.0055
76	0.0148	0.0092	0.0055

77	0.0148	0.0093	0.0056
78	0.0149	0.0093	0.0056
79	0.0150	0.0094	0.0056
80	0.0150	0.0094	0.0056
81	0.0151	0.0094	0.0056
82	0.0151	0.0094	0.0056
83	0.0152	0.0095	0.0057
84	0.0152	0.0095	0.0057
85	0.0153	0.0096	0.0057
86	0.0153	0.0096	0.0057
87	0.0154	0.0096	0.0058
88	0.0154	0.0097	0.0058
89	0.0155	0.0097	0.0058
90	0.0156	0.0097	0.0058
91	0.0156	0.0098	0.0059
92	0.0157	0.0098	0.0059
93	0.0158	0.0099	0.0059
94	0.0158	0.0099	0.0059
95	0.0159	0.0100	0.0060
96	0.0160	0.0100	0.0060
97	0.0160	0.0100	0.0060
98	0.0161	0.0101	0.0060
99	0.0162	0.0101	0.0061
100	0.0162	0.0102	0.0061
101	0.0163	0.0102	0.0061
102	0.0164	0.0102	0.0061
103	0.0165	0.0103	0.0062
104	0.0165	0.0103	0.0062
105	0.0166	0.0104	0.0062
106	0.0167	0.0104	0.0062
107	0.0168	0.0105	0.0063
108	0.0168	0.0105	0.0063
109	0.0169	0.0106	0.0063
110	0.0170	0.0106	0.0064
111	0.0171	0.0107	0.0064
112	0.0172	0.0107	0.0064
113	0.0173	0.0108	0.0065
114	0.0173	0.0109	0.0065
115	0.0175	0.0109	0.0065
116	0.0175	0.0110	0.0066
117	0.0177	0.0110	0.0066
118	0.0177	0.0111	0.0066
119	0.0178	0.0112	0.0067
120	0.0179	0.0112	0.0067
121	0.0180	0.0113	0.0068
122	0.0181	0.0113	0.0068
123	0.0183	0.0114	0.0068
124	0.0183	0.0115	0.0069
125	0.0185	0.0116	0.0069
126	0.0186	0.0116	0.0069
127	0.0187	0.0117	0.0070
128	0.0188	0.0118	0.0070
129	0.0189	0.0119	0.0071
130	0.0190	0.0119	0.0071
131	0.0192	0.0120	0.0072
132	0.0193	0.0121	0.0072
133	0.0194	0.0122	0.0073
134	0.0195	0.0122	0.0073
135	0.0197	0.0123	0.0074
136	0.0198	0.0124	0.0074
137	0.0200	0.0125	0.0075
138	0.0201	0.0126	0.0075
139	0.0203	0.0127	0.0076
140	0.0204	0.0128	0.0076
141	0.0206	0.0129	0.0077
142	0.0207	0.0130	0.0078
143	0.0210	0.0131	0.0078
144	0.0211	0.0132	0.0079
145	0.0224	0.0140	0.0084
146	0.0225	0.0141	0.0084
147	0.0227	0.0142	0.0085

148	0.0229	0.0143	0.0086
149	0.0231	0.0145	0.0087
150	0.0233	0.0146	0.0087
151	0.0235	0.0147	0.0088
152	0.0237	0.0148	0.0089
153	0.0240	0.0150	0.0090
154	0.0241	0.0151	0.0090
155	0.0245	0.0153	0.0092
156	0.0246	0.0154	0.0092
157	0.0250	0.0156	0.0093
158	0.0251	0.0157	0.0094
159	0.0255	0.0160	0.0095
160	0.0257	0.0161	0.0096
161	0.0261	0.0163	0.0098
162	0.0263	0.0165	0.0099
163	0.0268	0.0168	0.0100
164	0.0270	0.0169	0.0101
165	0.0275	0.0172	0.0103
166	0.0277	0.0174	0.0104
167	0.0283	0.0177	0.0106
168	0.0286	0.0179	0.0107
169	0.0292	0.0183	0.0109
170	0.0295	0.0185	0.0111
171	0.0302	0.0189	0.0113
172	0.0306	0.0191	0.0114
173	0.0313	0.0196	0.0117
174	0.0318	0.0199	0.0119
175	0.0326	0.0204	0.0122
176	0.0331	0.0207	0.0124
177	0.0341	0.0214	0.0128
178	0.0347	0.0217	0.0130
179	0.0360	0.0225	0.0135
180	0.0366	0.0229	0.0137
181	0.0382	0.0239	0.0143
182	0.0390	0.0244	0.0146
183	0.0410	0.0256	0.0153
184	0.0421	0.0263	0.0158
185	0.0218	0.0137	0.0082
186	0.0233	0.0146	0.0087
187	0.0270	0.0169	0.0101
188	0.0295	0.0184	0.0110
189	0.0367	0.0229	0.0137
190	0.0422	0.0264	0.0158
191	0.0641	0.0401	0.0240
192	0.0930	0.0508	0.0422
193	0.4023	0.0508	0.3514
194	0.0504	0.0316	0.0189
195	0.0326	0.0204	0.0122
196	0.0250	0.0156	0.0093
197	0.0433	0.0271	0.0162
198	0.0400	0.0250	0.0150
199	0.0374	0.0234	0.0140
200	0.0353	0.0221	0.0132
201	0.0336	0.0210	0.0126
202	0.0322	0.0201	0.0120
203	0.0310	0.0194	0.0116
204	0.0299	0.0187	0.0112
205	0.0289	0.0181	0.0108
206	0.0280	0.0175	0.0105
207	0.0272	0.0170	0.0102
208	0.0265	0.0166	0.0099
209	0.0259	0.0162	0.0097
210	0.0253	0.0159	0.0095
211	0.0248	0.0155	0.0093
212	0.0243	0.0152	0.0091
213	0.0238	0.0149	0.0089
214	0.0234	0.0146	0.0088
215	0.0230	0.0144	0.0086
216	0.0226	0.0142	0.0085
217	0.0212	0.0133	0.0079
218	0.0208	0.0130	0.0078

219	0.0205	0.0128	0.0077
220	0.0202	0.0126	0.0076
221	0.0199	0.0125	0.0075
222	0.0196	0.0123	0.0073
223	0.0194	0.0121	0.0072
224	0.0191	0.0120	0.0071
225	0.0189	0.0118	0.0071
226	0.0186	0.0117	0.0070
227	0.0184	0.0115	0.0069
228	0.0182	0.0114	0.0068
229	0.0180	0.0113	0.0067
230	0.0178	0.0111	0.0067
231	0.0176	0.0110	0.0066
232	0.0174	0.0109	0.0065
233	0.0172	0.0108	0.0064
234	0.0171	0.0107	0.0064
235	0.0169	0.0106	0.0063
236	0.0167	0.0105	0.0063
237	0.0166	0.0104	0.0062
238	0.0164	0.0103	0.0061
239	0.0163	0.0102	0.0061
240	0.0161	0.0101	0.0060
241	0.0160	0.0100	0.0060
242	0.0159	0.0099	0.0059
243	0.0157	0.0098	0.0059
244	0.0156	0.0098	0.0058
245	0.0155	0.0097	0.0058
246	0.0154	0.0096	0.0057
247	0.0152	0.0095	0.0057
248	0.0151	0.0095	0.0057
249	0.0150	0.0094	0.0056
250	0.0149	0.0093	0.0056
251	0.0148	0.0093	0.0055
252	0.0147	0.0092	0.0055
253	0.0146	0.0091	0.0055
254	0.0145	0.0091	0.0054
255	0.0144	0.0090	0.0054
256	0.0143	0.0090	0.0054
257	0.0142	0.0089	0.0053
258	0.0141	0.0088	0.0053
259	0.0141	0.0088	0.0053
260	0.0140	0.0087	0.0052
261	0.0139	0.0087	0.0052
262	0.0138	0.0086	0.0052
263	0.0137	0.0086	0.0051
264	0.0136	0.0085	0.0051
265	0.0136	0.0085	0.0051
266	0.0135	0.0084	0.0050
267	0.0134	0.0084	0.0050
268	0.0133	0.0083	0.0050
269	0.0133	0.0083	0.0050
270	0.0132	0.0083	0.0049
271	0.0131	0.0082	0.0049
272	0.0131	0.0082	0.0049
273	0.0130	0.0081	0.0049
274	0.0129	0.0081	0.0048
275	0.0129	0.0081	0.0048
276	0.0128	0.0080	0.0048
277	0.0127	0.0080	0.0048
278	0.0127	0.0079	0.0047
279	0.0126	0.0079	0.0047
280	0.0126	0.0079	0.0047
281	0.0125	0.0078	0.0047
282	0.0124	0.0078	0.0047
283	0.0124	0.0078	0.0046
284	0.0123	0.0077	0.0046
285	0.0123	0.0077	0.0046
286	0.0122	0.0076	0.0046
287	0.0122	0.0076	0.0046
288	0.0121	0.0076	0.0045

```
      ------------------------------------------------------------------
      Total soil rain loss =      3.47(In)
      Total effective rainfall =      2.41(In)
      Peak flow rate in flood hydrograph =     83.73(CFS)
      ------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       22.5      45.0      67.5      90.0
----------------------------------------------------------------------
  0+ 5       0.0011      0.17  Q         |         |         |         |
  0+10       0.0089      1.12  Q         |         |         |         |
  0+15       0.0214      1.82  Q         |         |         |         |
  0+20       0.0357      2.08  Q         |         |         |         |
  0+25       0.0510      2.23  Q         |         |         |         |
  0+30       0.0669      2.31  VQ        |         |         |         |
  0+35       0.0830      2.34  VQ        |         |         |         |
  0+40       0.0993      2.36  VQ        |         |         |         |
  0+45       0.1156      2.38  VQ        |         |         |         |
  0+50       0.1321      2.39  VQ        |         |         |         |
  0+55       0.1486      2.40  VQ        |         |         |         |
  1+ 0       0.1651      2.40  VQ        |         |         |         |
  1+ 5       0.1817      2.41  VQ        |         |         |         |
  1+10       0.1983      2.41  VQ        |         |         |         |
  1+15       0.2150      2.42  VQ        |         |         |         |
  1+20       0.2317      2.42  |Q        |         |         |         |
  1+25       0.2484      2.43  |Q        |         |         |         |
  1+30       0.2652      2.43  |Q        |         |         |         |
  1+35       0.2820      2.44  |Q        |         |         |         |
  1+40       0.2988      2.45  |Q        |         |         |         |
  1+45       0.3157      2.45  |Q        |         |         |         |
  1+50       0.3326      2.46  |Q        |         |         |         |
  1+55       0.3496      2.46  |Q        |         |         |         |
  2+ 0       0.3666      2.47  |Q        |         |         |         |
  2+ 5       0.3836      2.47  |Q        |         |         |         |
  2+10       0.4007      2.48  |Q        |         |         |         |
  2+15       0.4179      2.49  |Q        |         |         |         |
  2+20       0.4350      2.49  |QV       |         |         |         |
  2+25       0.4522      2.50  |QV       |         |         |         |
  2+30       0.4695      2.51  |QV       |         |         |         |
  2+35       0.4868      2.51  |QV       |         |         |         |
  2+40       0.5041      2.52  |QV       |         |         |         |
  2+45       0.5215      2.52  |QV       |         |         |         |
  2+50       0.5389      2.53  |QV       |         |         |         |
  2+55       0.5564      2.54  |QV       |         |         |         |
  3+ 0       0.5739      2.54  |QV       |         |         |         |
  3+ 5       0.5915      2.55  |QV       |         |         |         |
  3+10       0.6091      2.56  |QV       |         |         |         |
  3+15       0.6268      2.56  |QV       |         |         |         |
  3+20       0.6445      2.57  |QV       |         |         |         |
  3+25       0.6622      2.58  |Q V      |         |         |         |
  3+30       0.6800      2.58  |Q V      |         |         |         |
  3+35       0.6978      2.59  |Q V      |         |         |         |
  3+40       0.7157      2.60  |Q V      |         |         |         |
  3+45       0.7337      2.60  |Q V      |         |         |         |
  3+50       0.7517      2.61  |Q V      |         |         |         |
  3+55       0.7697      2.62  |Q V      |         |         |         |
  4+ 0       0.7878      2.63  |Q V      |         |         |         |
  4+ 5       0.8059      2.63  |Q V      |         |         |         |
  4+10       0.8241      2.64  |Q V      |         |         |         |
  4+15       0.8424      2.65  |Q V      |         |         |         |
  4+20       0.8607      2.66  |Q V      |         |         |         |
  4+25       0.8790      2.66  |Q  V     |         |         |         |
  4+30       0.8974      2.67  |Q  V     |         |         |         |
  4+35       0.9159      2.68  |Q  V     |         |         |         |
  4+40       0.9344      2.69  |Q  V     |         |         |         |
  4+45       0.9529      2.70  |Q  V     |         |         |         |
```

```
 4+50       0.9715      2.70  |Q  V     |          |          |          |
 4+55       0.9902      2.71  |Q  V     |          |          |          |
 5+ 0       1.0090      2.72  |Q  V     |          |          |          |
 5+ 5       1.0277      2.73  |Q  V     |          |          |          |
 5+10       1.0466      2.74  |Q  V     |          |          |          |
 5+15       1.0655      2.74  |Q  V     |          |          |          |
 5+20       1.0844      2.75  |Q   V    |          |          |          |
 5+25       1.1035      2.76  |Q   V    |          |          |          |
 5+30       1.1225      2.77  |Q   V    |          |          |          |
 5+35       1.1417      2.78  |Q   V    |          |          |          |
 5+40       1.1609      2.79  |Q   V    |          |          |          |
 5+45       1.1802      2.80  |Q   V    |          |          |          |
 5+50       1.1995      2.81  |Q   V    |          |          |          |
 5+55       1.2189      2.82  |Q   V    |          |          |          |
 6+ 0       1.2383      2.83  |Q   V    |          |          |          |
 6+ 5       1.2579      2.83  |Q   V    |          |          |          |
 6+10       1.2774      2.84  |Q   V    |          |          |          |
 6+15       1.2971      2.85  |Q    V   |          |          |          |
 6+20       1.3168      2.86  |Q    V   |          |          |          |
 6+25       1.3366      2.87  |Q    V   |          |          |          |
 6+30       1.3565      2.88  |Q    V   |          |          |          |
 6+35       1.3764      2.89  |Q    V   |          |          |          |
 6+40       1.3964      2.90  |Q    V   |          |          |          |
 6+45       1.4165      2.91  |Q    V   |          |          |          |
 6+50       1.4366      2.92  |Q    V   |          |          |          |
 6+55       1.4568      2.94  |Q    V   |          |          |          |
 7+ 0       1.4771      2.95  |Q    V   |          |          |          |
 7+ 5       1.4975      2.96  |Q    V   |          |          |          |
 7+10       1.5179      2.97  |Q     V  |          |          |          |
 7+15       1.5384      2.98  |Q     V  |          |          |          |
 7+20       1.5590      2.99  |Q     V  |          |          |          |
 7+25       1.5797      3.00  |Q     V  |          |          |          |
 7+30       1.6005      3.01  |Q     V  |          |          |          |
 7+35       1.6213      3.03  |Q     V  |          |          |          |
 7+40       1.6422      3.04  |Q     V  |          |          |          |
 7+45       1.6632      3.05  |Q     V  |          |          |          |
 7+50       1.6843      3.06  |Q     V  |          |          |          |
 7+55       1.7055      3.07  |Q     V  |          |          |          |
 8+ 0       1.7268      3.09  |Q      V |          |          |          |
 8+ 5       1.7481      3.10  |Q      V |          |          |          |
 8+10       1.7696      3.11  |Q      V |          |          |          |
 8+15       1.7911      3.13  |Q      V |          |          |          |
 8+20       1.8127      3.14  |Q      V |          |          |          |
 8+25       1.8344      3.15  |Q      V |          |          |          |
 8+30       1.8562      3.17  |Q      V |          |          |          |
 8+35       1.8782      3.18  |Q      V |          |          |          |
 8+40       1.9002      3.20  |Q      V |          |          |          |
 8+45       1.9223      3.21  |Q      V |          |          |          |
 8+50       1.9445      3.23  |Q       V|          |          |          |
 8+55       1.9668      3.24  |Q       V|          |          |          |
 9+ 0       1.9892      3.26  |Q       V|          |          |          |
 9+ 5       2.0117      3.27  |Q       V|          |          |          |
 9+10       2.0344      3.29  |Q       V|          |          |          |
 9+15       2.0571      3.30  |Q       V|          |          |          |
 9+20       2.0800      3.32  |Q       V|          |          |          |
 9+25       2.1029      3.33  |Q       V|          |          |          |
 9+30       2.1260      3.35  |Q       V|          |          |          |
 9+35       2.1492      3.37  |Q       V|          |          |          |
 9+40       2.1725      3.39  |Q        V          |          |          |
 9+45       2.1960      3.40  |Q        V          |          |          |
 9+50       2.2195      3.42  |Q        V          |          |          |
 9+55       2.2432      3.44  |Q        V          |          |          |
10+ 0       2.2671      3.46  |Q        V          |          |          |
10+ 5       2.2910      3.48  |Q        V          |          |          |
10+10       2.3151      3.50  |Q        V          |          |          |
10+15       2.3393      3.52  |Q        V          |          |          |
10+20       2.3637      3.54  |Q        V          |          |          |
10+25       2.3882      3.56  |Q        |V         |          |          |
10+30       2.4128      3.58  |Q        |V         |          |          |
10+35       2.4376      3.60  |Q        |V         |          |          |
10+40       2.4626      3.62  |Q        |V         |          |          |
```

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10+45       2.4877      3.64  |Q        |V        |         |         |
10+50       2.5130      3.67  |Q        |V        |         |         |
10+55       2.5384      3.69  |Q        |V        |         |         |
11+ 0       2.5640      3.72  |Q        |V        |         |         |
11+ 5       2.5897      3.74  |Q        |V        |         |         |
11+10       2.6156      3.77  |Q        | V       |         |         |
11+15       2.6417      3.79  |Q        | V       |         |         |
11+20       2.6680      3.82  |Q        | V       |         |         |
11+25       2.6945      3.84  |Q        | V       |         |         |
11+30       2.7212      3.87  |Q        | V       |         |         |
11+35       2.7480      3.90  |Q        | V       |         |         |
11+40       2.7751      3.93  |Q        | V       |         |         |
11+45       2.8023      3.96  |Q        | V       |         |         |
11+50       2.8298      3.99  |Q        |  V      |         |         |
11+55       2.8575      4.02  |Q        |  V      |         |         |
12+ 0       2.8854      4.05  |Q        |  V      |         |         |
12+ 5       2.9136      4.10  |Q        |  V      |         |         |
12+10       2.9426      4.22  |Q        |  V      |         |         |
12+15       2.9723      4.31  |Q        |  V      |         |         |
12+20       3.0024      4.37  |Q        |  V      |         |         |
12+25       3.0329      4.42  |Q        |   V     |         |         |
12+30       3.0636      4.46  |Q        |   V     |         |         |
12+35       3.0946      4.50  | Q       |   V     |         |         |
12+40       3.1259      4.55  | Q       |   V     |         |         |
12+45       3.1575      4.59  | Q       |   V     |         |         |
12+50       3.1894      4.63  | Q       |   V     |         |         |
12+55       3.2216      4.67  | Q       |   V     |         |         |
13+ 0       3.2541      4.72  | Q       |    V    |         |         |
13+ 5       3.2869      4.76  | Q       |    V    |         |         |
13+10       3.3200      4.82  | Q       |    V    |         |         |
13+15       3.3535      4.86  | Q       |    V    |         |         |
13+20       3.3874      4.92  | Q       |    V    |         |         |
13+25       3.4216      4.97  | Q       |    V    |         |         |
13+30       3.4563      5.03  | Q       |     V   |         |         |
13+35       3.4913      5.09  | Q       |     V   |         |         |
13+40       3.5268      5.15  | Q       |     V   |         |         |
13+45       3.5627      5.22  | Q       |     V   |         |         |
13+50       3.5991      5.29  | Q       |     V   |         |         |
13+55       3.6360      5.35  | Q       |     V   |         |         |
14+ 0       3.6734      5.43  | Q       |      V  |         |         |
14+ 5       3.7114      5.51  | Q       |      V  |         |         |
14+10       3.7500      5.60  | Q       |      V  |         |         |
14+15       3.7892      5.69  | Q       |      V  |         |         |
14+20       3.8290      5.79  | Q       |      V  |         |         |
14+25       3.8696      5.89  | Q       |      V  |         |         |
14+30       3.9109      6.00  | Q       |       V |         |         |
14+35       3.9529      6.11  | Q       |       V |         |         |
14+40       3.9958      6.23  | Q       |       V |         |         |
14+45       4.0396      6.36  | Q       |       V |         |         |
14+50       4.0844      6.51  | Q       |       V |         |         |
14+55       4.1303      6.65  | Q       |        V|         |         |
15+ 0       4.1773      6.83  |  Q      |        V|         |         |
15+ 5       4.2256      7.01  |  Q      |        V|         |         |
15+10       4.2753      7.22  |  Q      |        V|         |         |
15+15       4.3265      7.44  |  Q      |         V         |         |
15+20       4.3797      7.71  |  Q      |         V         |         |
15+25       4.4325      7.68  |  Q      |         V         |         |
15+30       4.4754      6.23  | Q       |         V         |         |
15+35       4.5119      5.29  | Q       |         V         |         |
15+40       4.5484      5.30  | Q       |         |V        |         |
15+45       4.5870      5.61  | Q       |         |V        |         |
15+50       4.6309      6.37  | Q       |         |V        |         |
15+55       4.6832      7.59  |  Q      |         |V        |         |
16+ 0       4.7554     10.49  |   Q     |         | V       |         |
16+ 5       4.9427     27.18  |         | Q       | V       |         |
16+10       5.5193     83.73  |         |         |    V    |      Q  |
16+15       5.9444     61.73  |         |         |     Q   |         |
16+20       6.1364     27.87  |         | Q       |      V  |         |
16+25       6.2580     17.65  |      Q  |         |      V  |         |
16+30       6.3474     12.99  |    Q    |         |       V |         |
16+35       6.4151      9.82  |   Q     |         |       V |         |
```

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16+40       6.4741      8.57  |  Q       |          |         V|          |
16+45       6.5294      8.03  |  Q       |          |          V          |
16+50       6.5803      7.40  |  Q       |          |          V          |
16+55       6.6265      6.70  | Q        |          |          V          |
17+ 0       6.6697      6.27  | Q        |          |          V          |
17+ 5       6.7113      6.04  | Q        |          |          |V         |
17+10       6.7514      5.83  | Q        |          |          |V         |
17+15       6.7903      5.64  | Q        |          |          |V         |
17+20       6.8280      5.47  | Q        |          |          |V         |
17+25       6.8646      5.32  | Q        |          |          |V         |
17+30       6.9002      5.18  | Q        |          |          |V         |
17+35       6.9351      5.05  | Q        |          |          | V        |
17+40       6.9691      4.94  | Q        |          |          | V        |
17+45       7.0024      4.83  | Q        |          |          | V        |
17+50       7.0350      4.74  | Q        |          |          | V        |
17+55       7.0670      4.65  | Q        |          |          | V        |
18+ 0       7.0984      4.56  | Q        |          |          | V        |
18+ 5       7.1292      4.47  |Q         |          |          |  V       |
18+10       7.1588      4.31  |Q         |          |          |  V       |
18+15       7.1876      4.18  |Q         |          |          |  V       |
18+20       7.2158      4.09  |Q         |          |          |  V       |
18+25       7.2434      4.01  |Q         |          |          |  V       |
18+30       7.2705      3.94  |Q         |          |          |  V       |
18+35       7.2973      3.88  |Q         |          |          |  V       |
18+40       7.3236      3.83  |Q         |          |          |  V       |
18+45       7.3496      3.77  |Q         |          |          |   V      |
18+50       7.3753      3.72  |Q         |          |          |   V      |
18+55       7.4006      3.68  |Q         |          |          |   V      |
19+ 0       7.4256      3.63  |Q         |          |          |   V      |
19+ 5       7.4503      3.59  |Q         |          |          |   V      |
19+10       7.4747      3.54  |Q         |          |          |   V      |
19+15       7.4988      3.50  |Q         |          |          |   V      |
19+20       7.5227      3.46  |Q         |          |          |   V      |
19+25       7.5463      3.43  |Q         |          |          |   V      |
19+30       7.5697      3.39  |Q         |          |          |    V     |
19+35       7.5928      3.36  |Q         |          |          |    V     |
19+40       7.6157      3.32  |Q         |          |          |    V     |
19+45       7.6383      3.29  |Q         |          |          |    V     |
19+50       7.6608      3.26  |Q         |          |          |    V     |
19+55       7.6830      3.23  |Q         |          |          |    V     |
20+ 0       7.7051      3.20  |Q         |          |          |    V     |
20+ 5       7.7269      3.17  |Q         |          |          |    V     |
20+10       7.7486      3.14  |Q         |          |          |    V     |
20+15       7.7700      3.12  |Q         |          |          |    V     |
20+20       7.7913      3.09  |Q         |          |          |     V    |
20+25       7.8124      3.07  |Q         |          |          |     V    |
20+30       7.8334      3.04  |Q         |          |          |     V    |
20+35       7.8542      3.02  |Q         |          |          |     V    |
20+40       7.8748      2.99  |Q         |          |          |     V    |
20+45       7.8952      2.97  |Q         |          |          |     V    |
20+50       7.9156      2.95  |Q         |          |          |     V    |
20+55       7.9357      2.93  |Q         |          |          |     V    |
21+ 0       7.9557      2.91  |Q         |          |          |     V    |
21+ 5       7.9756      2.89  |Q         |          |          |     V    |
21+10       7.9954      2.87  |Q         |          |          |      V   |
21+15       8.0150      2.85  |Q         |          |          |      V   |
21+20       8.0344      2.83  |Q         |          |          |      V   |
21+25       8.0538      2.81  |Q         |          |          |      V   |
21+30       8.0730      2.79  |Q         |          |          |      V   |
21+35       8.0921      2.77  |Q         |          |          |      V   |
21+40       8.1111      2.76  |Q         |          |          |      V   |
21+45       8.1299      2.74  |Q         |          |          |      V   |
21+50       8.1487      2.72  |Q         |          |          |      V   |
21+55       8.1673      2.71  |Q         |          |          |      V   |
22+ 0       8.1858      2.69  |Q         |          |          |      V   |
22+ 5       8.2043      2.67  |Q         |          |          |       V  |
22+10       8.2226      2.66  |Q         |          |          |       V  |
22+15       8.2408      2.64  |Q         |          |          |       V  |
22+20       8.2589      2.63  |Q         |          |          |       V  |
22+25       8.2769      2.61  |Q         |          |          |       V  |
22+30       8.2948      2.60  |Q         |          |          |       V  |
```

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   22+35       8.3126      2.59  |Q        |          |          |       V |
   22+40       8.3303      2.57  |Q        |          |          |       V |
   22+45       8.3479      2.56  |Q        |          |          |       V |
   22+50       8.3655      2.55  |Q        |          |          |       V |
   22+55       8.3829      2.53  |Q        |          |          |       V |
   23+ 0       8.4003      2.52  |Q        |          |          |       V |
   23+ 5       8.4175      2.51  |Q        |          |          |       V |
   23+10       8.4347      2.49  |Q        |          |          |        V|
   23+15       8.4518      2.48  |Q        |          |          |        V|
   23+20       8.4688      2.47  |Q        |          |          |        V|
   23+25       8.4857      2.46  |Q        |          |          |        V|
   23+30       8.5026      2.45  |Q        |          |          |        V|
   23+35       8.5194      2.44  |Q        |          |          |        V|
   23+40       8.5361      2.42  |Q        |          |          |        V|
   23+45       8.5527      2.41  |Q        |          |          |        V|
   23+50       8.5693      2.40  |Q        |          |          |        V|
   23+55       8.5857      2.39  |Q        |          |          |        V|
   24+ 0       8.6021      2.38  |Q        |          |          |        V|
   24+ 5       8.6173      2.21  Q         |          |          |        V|
   24+10       8.6259      1.24  Q         |          |          |        V|
   24+15       8.6296      0.55  Q         |          |          |        V|
   24+20       8.6316      0.28  Q         |          |          |        V|
   24+25       8.6326      0.14  Q         |          |          |        V|
   24+30       8.6330      0.06  Q         |          |          |        V|
   24+35       8.6332      0.04  Q         |          |          |        V|
   24+40       8.6334      0.02  Q         |          |          |        V|
   24+45       8.6335      0.01  Q         |          |          |        V|
   24+50       8.6335      0.00  Q         |          |          |        V|
-------------------------------------------------------------------------
```

Area 'A' – 10 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
10 YEAR 24 HOUR STORM
DECEMBER 16, 2024
----------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            43.08           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            43.08           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            43.08          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            43.08           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            43.08           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            43.08          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 36.7      36.7         43.08      1.000     0.945    0.610    0.577

Area-averaged adjusted loss rate Fm (In/Hr) =  0.577

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
26.28	0.610	36.7	36.7	17.25	0.096
16.80	0.390	98.0	98.0	0.20	0.967

Area-averaged catchment yield fraction, Y = 0.436
Area-averaged low loss fraction, Yb = 0.564
User entry of time of concentration = 0.150 (hours)
++
Watershed area = 43.08(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.4444
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.577(In/Hr)
Average low loss rate fraction (Yb) = 0.564 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 43.08(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.474(In)
30-minute factor = 0.998 Adjusted rainfall = 0.811(In)
1-hour factor = 0.998 Adjusted rainfall = 0.998(In)
3-hour factor = 1.000 Adjusted rainfall = 1.972(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 521.00 (CFS))	
1	7.065	36.808
2	47.670	211.553
3	76.988	152.744
4	87.984	57.293
5	94.086	31.790
6	97.295	16.719
7	98.498	6.265
8	99.120	3.241
9	99.604	2.523
10	99.910	1.595
11	100.000	0.467

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4736	0.4736
2	0.5830	0.1095
3	0.6584	0.0754
4	0.7178	0.0593
5	0.7675	0.0497
6	0.8106	0.0431
7	0.8490	0.0384
8	0.8837	0.0347
9	0.9155	0.0318
10	0.9449	0.0294
11	0.9723	0.0274
12	0.9980	0.0257
13	1.0488	0.0508
14	1.0981	0.0493

15	1.1461	0.0480
16	1.1929	0.0468
17	1.2385	0.0457
18	1.2832	0.0447
19	1.3270	0.0437
20	1.3699	0.0429
21	1.4119	0.0421
22	1.4533	0.0413
23	1.4939	0.0406
24	1.5338	0.0399
25	1.5731	0.0393
26	1.6119	0.0387
27	1.6500	0.0382
28	1.6876	0.0376
29	1.7248	0.0371
30	1.7614	0.0366
31	1.7976	0.0362
32	1.8333	0.0357
33	1.8686	0.0353
34	1.9035	0.0349
35	1.9381	0.0345
36	1.9722	0.0341
37	2.0059	0.0337
38	2.0393	0.0334
39	2.0723	0.0330
40	2.1050	0.0327
41	2.1374	0.0324
42	2.1695	0.0321
43	2.2013	0.0318
44	2.2329	0.0315
45	2.2641	0.0313
46	2.2951	0.0310
47	2.3259	0.0307
48	2.3564	0.0305
49	2.3866	0.0302
50	2.4166	0.0300
51	2.4464	0.0298
52	2.4760	0.0296
53	2.5053	0.0293
54	2.5345	0.0291
55	2.5634	0.0289
56	2.5921	0.0287
57	2.6207	0.0285
58	2.6490	0.0283
59	2.6772	0.0282
60	2.7051	0.0280
61	2.7329	0.0278
62	2.7606	0.0276
63	2.7880	0.0275
64	2.8153	0.0273
65	2.8425	0.0271
66	2.8694	0.0270
67	2.8962	0.0268
68	2.9229	0.0267
69	2.9494	0.0265
70	2.9758	0.0264
71	3.0020	0.0262
72	3.0281	0.0261
73	3.0547	0.0266
74	3.0812	0.0265
75	3.1075	0.0263
76	3.1337	0.0262
77	3.1598	0.0261
78	3.1857	0.0259
79	3.2115	0.0258
80	3.2372	0.0257
81	3.2628	0.0256
82	3.2883	0.0255
83	3.3137	0.0254
84	3.3389	0.0252
85	3.3641	0.0251

86	3.3891	0.0250
87	3.4140	0.0249
88	3.4388	0.0248
89	3.4635	0.0247
90	3.4882	0.0246
91	3.5127	0.0245
92	3.5371	0.0244
93	3.5614	0.0243
94	3.5856	0.0242
95	3.6098	0.0241
96	3.6338	0.0240
97	3.6578	0.0239
98	3.6816	0.0239
99	3.7054	0.0238
100	3.7291	0.0237
101	3.7527	0.0236
102	3.7762	0.0235
103	3.7996	0.0234
104	3.8229	0.0233
105	3.8462	0.0233
106	3.8694	0.0232
107	3.8925	0.0231
108	3.9155	0.0230
109	3.9384	0.0229
110	3.9613	0.0229
111	3.9841	0.0228
112	4.0068	0.0227
113	4.0294	0.0226
114	4.0520	0.0226
115	4.0745	0.0225
116	4.0969	0.0224
117	4.1193	0.0224
118	4.1415	0.0223
119	4.1637	0.0222
120	4.1859	0.0221
121	4.2080	0.0221
122	4.2300	0.0220
123	4.2519	0.0219
124	4.2738	0.0219
125	4.2956	0.0218
126	4.3174	0.0217
127	4.3390	0.0217
128	4.3607	0.0216
129	4.3822	0.0216
130	4.4037	0.0215
131	4.4252	0.0214
132	4.4466	0.0214
133	4.4679	0.0213
134	4.4891	0.0213
135	4.5103	0.0212
136	4.5315	0.0211
137	4.5526	0.0211
138	4.5736	0.0210
139	4.5946	0.0210
140	4.6155	0.0209
141	4.6364	0.0209
142	4.6572	0.0208
143	4.6780	0.0208
144	4.6987	0.0207
145	4.7193	0.0207
146	4.7399	0.0206
147	4.7605	0.0206
148	4.7810	0.0205
149	4.8014	0.0205
150	4.8218	0.0204
151	4.8422	0.0204
152	4.8625	0.0203
153	4.8827	0.0203
154	4.9029	0.0202
155	4.9231	0.0202
156	4.9432	0.0201

157	4.9633	0.0201
158	4.9833	0.0200
159	5.0033	0.0200
160	5.0232	0.0199
161	5.0431	0.0199
162	5.0629	0.0198
163	5.0827	0.0198
164	5.1024	0.0197
165	5.1221	0.0197
166	5.1418	0.0197
167	5.1614	0.0196
168	5.1809	0.0196
169	5.2005	0.0195
170	5.2200	0.0195
171	5.2394	0.0194
172	5.2588	0.0194
173	5.2782	0.0194
174	5.2975	0.0193
175	5.3167	0.0193
176	5.3360	0.0192
177	5.3552	0.0192
178	5.3743	0.0192
179	5.3935	0.0191
180	5.4125	0.0191
181	5.4316	0.0190
182	5.4506	0.0190
183	5.4695	0.0190
184	5.4885	0.0189
185	5.5074	0.0189
186	5.5262	0.0189
187	5.5450	0.0188
188	5.5638	0.0188
189	5.5825	0.0187
190	5.6012	0.0187
191	5.6199	0.0187
192	5.6385	0.0186
193	5.6571	0.0186
194	5.6757	0.0186
195	5.6942	0.0185
196	5.7127	0.0185
197	5.7312	0.0185
198	5.7496	0.0184
199	5.7680	0.0184
200	5.7863	0.0184
201	5.8047	0.0183
202	5.8229	0.0183
203	5.8412	0.0183
204	5.8594	0.0182
205	5.8776	0.0182
206	5.8958	0.0182
207	5.9139	0.0181
208	5.9320	0.0181
209	5.9500	0.0181
210	5.9681	0.0180
211	5.9861	0.0180
212	6.0040	0.0180
213	6.0220	0.0179
214	6.0399	0.0179
215	6.0578	0.0179
216	6.0756	0.0178
217	6.0934	0.0178
218	6.1112	0.0178
219	6.1289	0.0178
220	6.1467	0.0177
221	6.1644	0.0177
222	6.1820	0.0177
223	6.1997	0.0176
224	6.2173	0.0176
225	6.2348	0.0176
226	6.2524	0.0175
227	6.2699	0.0175

228	6.2874	0.0175
229	6.3049	0.0175
230	6.3223	0.0174
231	6.3397	0.0174
232	6.3571	0.0174
233	6.3745	0.0174
234	6.3918	0.0173
235	6.4091	0.0173
236	6.4264	0.0173
237	6.4436	0.0172
238	6.4608	0.0172
239	6.4780	0.0172
240	6.4952	0.0172
241	6.5123	0.0171
242	6.5294	0.0171
243	6.5465	0.0171
244	6.5636	0.0171
245	6.5806	0.0170
246	6.5976	0.0170
247	6.6146	0.0170
248	6.6316	0.0170
249	6.6485	0.0169
250	6.6654	0.0169
251	6.6823	0.0169
252	6.6992	0.0169
253	6.7160	0.0168
254	6.7328	0.0168
255	6.7496	0.0168
256	6.7664	0.0168
257	6.7831	0.0167
258	6.7999	0.0167
259	6.8165	0.0167
260	6.8332	0.0167
261	6.8499	0.0166
262	6.8665	0.0166
263	6.8831	0.0166
264	6.8997	0.0166
265	6.9162	0.0166
266	6.9327	0.0165
267	6.9493	0.0165
268	6.9657	0.0165
269	6.9822	0.0165
270	6.9986	0.0164
271	7.0151	0.0164
272	7.0315	0.0164
273	7.0478	0.0164
274	7.0642	0.0164
275	7.0805	0.0163
276	7.0968	0.0163
277	7.1131	0.0163
278	7.1294	0.0163
279	7.1456	0.0162
280	7.1618	0.0162
281	7.1780	0.0162
282	7.1942	0.0162
283	7.2104	0.0162
284	7.2265	0.0161
285	7.2426	0.0161
286	7.2587	0.0161
287	7.2748	0.0161
288	7.2909	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0091	0.0070
2	0.0161	0.0091	0.0070
3	0.0161	0.0091	0.0070
4	0.0161	0.0091	0.0070
5	0.0162	0.0091	0.0071

6	0.0162	0.0091	0.0071
7	0.0162	0.0092	0.0071
8	0.0163	0.0092	0.0071
9	0.0163	0.0092	0.0071
10	0.0163	0.0092	0.0071
11	0.0164	0.0092	0.0071
12	0.0164	0.0093	0.0071
13	0.0164	0.0093	0.0072
14	0.0165	0.0093	0.0072
15	0.0165	0.0093	0.0072
16	0.0165	0.0093	0.0072
17	0.0166	0.0094	0.0072
18	0.0166	0.0094	0.0072
19	0.0166	0.0094	0.0073
20	0.0167	0.0094	0.0073
21	0.0167	0.0094	0.0073
22	0.0167	0.0094	0.0073
23	0.0168	0.0095	0.0073
24	0.0168	0.0095	0.0073
25	0.0169	0.0095	0.0073
26	0.0169	0.0095	0.0074
27	0.0169	0.0096	0.0074
28	0.0170	0.0096	0.0074
29	0.0170	0.0096	0.0074
30	0.0170	0.0096	0.0074
31	0.0171	0.0096	0.0074
32	0.0171	0.0097	0.0075
33	0.0172	0.0097	0.0075
34	0.0172	0.0097	0.0075
35	0.0172	0.0097	0.0075
36	0.0173	0.0097	0.0075
37	0.0173	0.0098	0.0076
38	0.0174	0.0098	0.0076
39	0.0174	0.0098	0.0076
40	0.0174	0.0098	0.0076
41	0.0175	0.0099	0.0076
42	0.0175	0.0099	0.0076
43	0.0176	0.0099	0.0077
44	0.0176	0.0099	0.0077
45	0.0177	0.0100	0.0077
46	0.0177	0.0100	0.0077
47	0.0178	0.0100	0.0077
48	0.0178	0.0100	0.0077
49	0.0178	0.0101	0.0078
50	0.0179	0.0101	0.0078
51	0.0179	0.0101	0.0078
52	0.0180	0.0101	0.0078
53	0.0180	0.0102	0.0079
54	0.0181	0.0102	0.0079
55	0.0181	0.0102	0.0079
56	0.0182	0.0102	0.0079
57	0.0182	0.0103	0.0079
58	0.0183	0.0103	0.0080
59	0.0183	0.0103	0.0080
60	0.0184	0.0104	0.0080
61	0.0184	0.0104	0.0080
62	0.0185	0.0104	0.0080
63	0.0185	0.0105	0.0081
64	0.0186	0.0105	0.0081
65	0.0186	0.0105	0.0081
66	0.0187	0.0105	0.0081
67	0.0187	0.0106	0.0082
68	0.0188	0.0106	0.0082
69	0.0189	0.0106	0.0082
70	0.0189	0.0107	0.0082
71	0.0190	0.0107	0.0083
72	0.0190	0.0107	0.0083
73	0.0191	0.0108	0.0083
74	0.0191	0.0108	0.0083
75	0.0192	0.0108	0.0084
76	0.0192	0.0109	0.0084

77	0.0193	0.0109	0.0084
78	0.0194	0.0109	0.0084
79	0.0194	0.0110	0.0085
80	0.0195	0.0110	0.0085
81	0.0196	0.0110	0.0085
82	0.0196	0.0111	0.0085
83	0.0197	0.0111	0.0086
84	0.0197	0.0111	0.0086
85	0.0198	0.0112	0.0086
86	0.0199	0.0112	0.0087
87	0.0200	0.0113	0.0087
88	0.0200	0.0113	0.0087
89	0.0201	0.0113	0.0088
90	0.0202	0.0114	0.0088
91	0.0203	0.0114	0.0088
92	0.0203	0.0115	0.0088
93	0.0204	0.0115	0.0089
94	0.0205	0.0115	0.0089
95	0.0206	0.0116	0.0090
96	0.0206	0.0116	0.0090
97	0.0207	0.0117	0.0090
98	0.0208	0.0117	0.0090
99	0.0209	0.0118	0.0091
100	0.0209	0.0118	0.0091
101	0.0210	0.0119	0.0092
102	0.0211	0.0119	0.0092
103	0.0212	0.0120	0.0092
104	0.0213	0.0120	0.0093
105	0.0214	0.0121	0.0093
106	0.0214	0.0121	0.0093
107	0.0216	0.0122	0.0094
108	0.0216	0.0122	0.0094
109	0.0217	0.0123	0.0095
110	0.0218	0.0123	0.0095
111	0.0219	0.0124	0.0096
112	0.0220	0.0124	0.0096
113	0.0221	0.0125	0.0096
114	0.0222	0.0125	0.0097
115	0.0224	0.0126	0.0097
116	0.0224	0.0127	0.0098
117	0.0226	0.0127	0.0098
118	0.0226	0.0128	0.0099
119	0.0228	0.0129	0.0099
120	0.0229	0.0129	0.0100
121	0.0230	0.0130	0.0100
122	0.0231	0.0130	0.0101
123	0.0233	0.0131	0.0101
124	0.0233	0.0132	0.0102
125	0.0235	0.0133	0.0102
126	0.0236	0.0133	0.0103
127	0.0238	0.0134	0.0104
128	0.0239	0.0135	0.0104
129	0.0240	0.0136	0.0105
130	0.0241	0.0136	0.0105
131	0.0243	0.0137	0.0106
132	0.0244	0.0138	0.0106
133	0.0246	0.0139	0.0107
134	0.0247	0.0139	0.0108
135	0.0249	0.0141	0.0109
136	0.0250	0.0141	0.0109
137	0.0252	0.0142	0.0110
138	0.0254	0.0143	0.0111
139	0.0256	0.0144	0.0112
140	0.0257	0.0145	0.0112
141	0.0259	0.0146	0.0113
142	0.0261	0.0147	0.0114
143	0.0263	0.0149	0.0115
144	0.0265	0.0149	0.0115
145	0.0261	0.0147	0.0114
146	0.0262	0.0148	0.0114
147	0.0265	0.0150	0.0116

148	0.0267	0.0150	0.0116
149	0.0270	0.0152	0.0118
150	0.0271	0.0153	0.0118
151	0.0275	0.0155	0.0120
152	0.0276	0.0156	0.0120
153	0.0280	0.0158	0.0122
154	0.0282	0.0159	0.0123
155	0.0285	0.0161	0.0124
156	0.0287	0.0162	0.0125
157	0.0291	0.0164	0.0127
158	0.0293	0.0166	0.0128
159	0.0298	0.0168	0.0130
160	0.0300	0.0169	0.0131
161	0.0305	0.0172	0.0133
162	0.0307	0.0173	0.0134
163	0.0313	0.0176	0.0136
164	0.0315	0.0178	0.0137
165	0.0321	0.0181	0.0140
166	0.0324	0.0183	0.0141
167	0.0330	0.0186	0.0144
168	0.0334	0.0188	0.0145
169	0.0341	0.0193	0.0149
170	0.0345	0.0195	0.0150
171	0.0353	0.0199	0.0154
172	0.0357	0.0202	0.0156
173	0.0366	0.0207	0.0160
174	0.0371	0.0209	0.0162
175	0.0382	0.0215	0.0166
176	0.0387	0.0219	0.0169
177	0.0399	0.0225	0.0174
178	0.0406	0.0229	0.0177
179	0.0421	0.0237	0.0183
180	0.0429	0.0242	0.0187
181	0.0447	0.0252	0.0195
182	0.0457	0.0258	0.0199
183	0.0480	0.0271	0.0209
184	0.0493	0.0278	0.0215
185	0.0257	0.0145	0.0112
186	0.0274	0.0155	0.0119
187	0.0318	0.0179	0.0138
188	0.0347	0.0196	0.0151
189	0.0431	0.0243	0.0188
190	0.0497	0.0280	0.0217
191	0.0754	0.0426	0.0329
192	0.1095	0.0480	0.0614
193	0.4736	0.0480	0.4255
194	0.0593	0.0335	0.0259
195	0.0384	0.0216	0.0167
196	0.0294	0.0166	0.0128
197	0.0508	0.0287	0.0221
198	0.0468	0.0264	0.0204
199	0.0437	0.0247	0.0191
200	0.0413	0.0233	0.0180
201	0.0393	0.0222	0.0171
202	0.0376	0.0212	0.0164
203	0.0362	0.0204	0.0158
204	0.0349	0.0197	0.0152
205	0.0337	0.0190	0.0147
206	0.0327	0.0185	0.0143
207	0.0318	0.0179	0.0139
208	0.0310	0.0175	0.0135
209	0.0302	0.0171	0.0132
210	0.0296	0.0167	0.0129
211	0.0289	0.0163	0.0126
212	0.0283	0.0160	0.0124
213	0.0278	0.0157	0.0121
214	0.0273	0.0154	0.0119
215	0.0268	0.0151	0.0117
216	0.0264	0.0149	0.0115
217	0.0266	0.0150	0.0116
218	0.0262	0.0148	0.0114

219	0.0258	0.0146	0.0113
220	0.0255	0.0144	0.0111
221	0.0251	0.0142	0.0110
222	0.0248	0.0140	0.0108
223	0.0245	0.0138	0.0107
224	0.0242	0.0137	0.0106
225	0.0239	0.0135	0.0104
226	0.0237	0.0134	0.0103
227	0.0234	0.0132	0.0102
228	0.0232	0.0131	0.0101
229	0.0229	0.0129	0.0100
230	0.0227	0.0128	0.0099
231	0.0225	0.0127	0.0098
232	0.0223	0.0126	0.0097
233	0.0221	0.0125	0.0096
234	0.0219	0.0123	0.0095
235	0.0217	0.0122	0.0094
236	0.0215	0.0121	0.0094
237	0.0213	0.0120	0.0093
238	0.0211	0.0119	0.0092
239	0.0210	0.0118	0.0091
240	0.0208	0.0117	0.0091
241	0.0207	0.0117	0.0090
242	0.0205	0.0116	0.0089
243	0.0204	0.0115	0.0089
244	0.0202	0.0114	0.0088
245	0.0201	0.0113	0.0087
246	0.0199	0.0112	0.0087
247	0.0198	0.0112	0.0086
248	0.0197	0.0111	0.0086
249	0.0195	0.0110	0.0085
250	0.0194	0.0109	0.0085
251	0.0193	0.0109	0.0084
252	0.0192	0.0108	0.0083
253	0.0190	0.0107	0.0083
254	0.0189	0.0107	0.0082
255	0.0188	0.0106	0.0082
256	0.0187	0.0106	0.0082
257	0.0186	0.0105	0.0081
258	0.0185	0.0104	0.0081
259	0.0184	0.0104	0.0080
260	0.0183	0.0103	0.0080
261	0.0182	0.0103	0.0079
262	0.0181	0.0102	0.0079
263	0.0180	0.0102	0.0078
264	0.0179	0.0101	0.0078
265	0.0178	0.0101	0.0078
266	0.0177	0.0100	0.0077
267	0.0176	0.0100	0.0077
268	0.0175	0.0099	0.0076
269	0.0175	0.0099	0.0076
270	0.0174	0.0098	0.0076
271	0.0173	0.0098	0.0075
272	0.0172	0.0097	0.0075
273	0.0171	0.0097	0.0075
274	0.0171	0.0096	0.0074
275	0.0170	0.0096	0.0074
276	0.0169	0.0095	0.0074
277	0.0168	0.0095	0.0073
278	0.0168	0.0095	0.0073
279	0.0167	0.0094	0.0073
280	0.0166	0.0094	0.0072
281	0.0166	0.0093	0.0072
282	0.0165	0.0093	0.0072
283	0.0164	0.0093	0.0072
284	0.0164	0.0092	0.0071
285	0.0163	0.0092	0.0071
286	0.0162	0.0092	0.0071
287	0.0162	0.0091	0.0070
288	0.0161	0.0091	0.0070

```
      ----------------------------------------------------------------------
      Total soil rain loss =      3.88(In)
      Total effective rainfall =      3.41(In)
      Peak flow rate in flood hydrograph =    103.43(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       50.0     100.0     150.0     200.0
----------------------------------------------------------------------------
  0+ 5       0.0018      0.26  Q         |         |         |         |
  0+10       0.0137      1.74  Q         |         |         |         |
  0+15       0.0331      2.81  Q         |         |         |         |
  0+20       0.0552      3.22  Q         |         |         |         |
  0+25       0.0790      3.44  Q         |         |         |         |
  0+30       0.1035      3.57  Q         |         |         |         |
  0+35       0.1284      3.62  Q         |         |         |         |
  0+40       0.1536      3.65  Q         |         |         |         |
  0+45       0.1789      3.67  Q         |         |         |         |
  0+50       0.2043      3.69  Q         |         |         |         |
  0+55       0.2298      3.70  Q         |         |         |         |
  1+ 0       0.2553      3.71  Q         |         |         |         |
  1+ 5       0.2809      3.72  Q         |         |         |         |
  1+10       0.3066      3.72  QV        |         |         |         |
  1+15       0.3323      3.73  QV        |         |         |         |
  1+20       0.3580      3.74  QV        |         |         |         |
  1+25       0.3838      3.75  QV        |         |         |         |
  1+30       0.4097      3.76  QV        |         |         |         |
  1+35       0.4356      3.76  QV        |         |         |         |
  1+40       0.4616      3.77  QV        |         |         |         |
  1+45       0.4876      3.78  QV        |         |         |         |
  1+50       0.5137      3.79  QV        |         |         |         |
  1+55       0.5398      3.79  QV        |         |         |         |
  2+ 0       0.5660      3.80  QV        |         |         |         |
  2+ 5       0.5922      3.81  QV        |         |         |         |
  2+10       0.6186      3.82  Q V       |         |         |         |
  2+15       0.6449      3.83  Q V       |         |         |         |
  2+20       0.6713      3.84  Q V       |         |         |         |
  2+25       0.6978      3.84  Q V       |         |         |         |
  2+30       0.7243      3.85  Q V       |         |         |         |
  2+35       0.7509      3.86  Q V       |         |         |         |
  2+40       0.7776      3.87  Q V       |         |         |         |
  2+45       0.8043      3.88  Q V       |         |         |         |
  2+50       0.8311      3.89  Q V       |         |         |         |
  2+55       0.8579      3.90  Q V       |         |         |         |
  3+ 0       0.8848      3.91  Q V       |         |         |         |
  3+ 5       0.9118      3.91  Q V       |         |         |         |
  3+10       0.9388      3.92  Q  V      |         |         |         |
  3+15       0.9659      3.93  Q  V      |         |         |         |
  3+20       0.9930      3.94  Q  V      |         |         |         |
  3+25       1.0202      3.95  Q  V      |         |         |         |
  3+30       1.0475      3.96  Q  V      |         |         |         |
  3+35       1.0749      3.97  Q  V      |         |         |         |
  3+40       1.1023      3.98  Q  V      |         |         |         |
  3+45       1.1298      3.99  Q  V      |         |         |         |
  3+50       1.1573      4.00  Q  V      |         |         |         |
  3+55       1.1849      4.01  Q  V      |         |         |         |
  4+ 0       1.2126      4.02  Q  V      |         |         |         |
  4+ 5       1.2404      4.03  Q   V     |         |         |         |
  4+10       1.2682      4.04  Q   V     |         |         |         |
  4+15       1.2961      4.05  Q   V     |         |         |         |
  4+20       1.3240      4.06  Q   V     |         |         |         |
  4+25       1.3521      4.07  Q   V     |         |         |         |
  4+30       1.3802      4.08  Q   V     |         |         |         |
  4+35       1.4084      4.09  Q   V     |         |         |         |
  4+40       1.4366      4.10  Q   V     |         |         |         |
  4+45       1.4650      4.11  Q   V     |         |         |         |
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 4+50      1.4934     4.13  Q   V     |         |         |         |
 4+55      1.5218     4.14  Q   V     |         |         |         |
 5+ 0      1.5504     4.15  Q    V    |         |         |         |
 5+ 5      1.5790     4.16  Q    V    |         |         |         |
 5+10      1.6078     4.17  Q    V    |         |         |         |
 5+15      1.6366     4.18  Q    V    |         |         |         |
 5+20      1.6654     4.19  Q    V    |         |         |         |
 5+25      1.6944     4.20  Q    V    |         |         |         |
 5+30      1.7234     4.22  Q    V    |         |         |         |
 5+35      1.7526     4.23  Q    V    |         |         |         |
 5+40      1.7818     4.24  Q    V    |         |         |         |
 5+45      1.8111     4.25  Q    V    |         |         |         |
 5+50      1.8405     4.27  Q     V   |         |         |         |
 5+55      1.8699     4.28  Q     V   |         |         |         |
 6+ 0      1.8995     4.29  Q     V   |         |         |         |
 6+ 5      1.9291     4.30  Q     V   |         |         |         |
 6+10      1.9589     4.32  Q     V   |         |         |         |
 6+15      1.9887     4.33  Q     V   |         |         |         |
 6+20      2.0186     4.34  Q     V   |         |         |         |
 6+25      2.0486     4.36  Q     V   |         |         |         |
 6+30      2.0787     4.37  Q     V   |         |         |         |
 6+35      2.1089     4.38  Q     V   |         |         |         |
 6+40      2.1392     4.40  Q     V   |         |         |         |
 6+45      2.1696     4.41  Q      V  |         |         |         |
 6+50      2.2001     4.43  Q      V  |         |         |         |
 6+55      2.2307     4.44  Q      V  |         |         |         |
 7+ 0      2.2613     4.46  Q      V  |         |         |         |
 7+ 5      2.2921     4.47  Q      V  |         |         |         |
 7+10      2.3230     4.49  Q      V  |         |         |         |
 7+15      2.3540     4.50  Q      V  |         |         |         |
 7+20      2.3851     4.52  Q      V  |         |         |         |
 7+25      2.4163     4.53  Q      V  |         |         |         |
 7+30      2.4477     4.55  Q       V |         |         |         |
 7+35      2.4791     4.56  Q       V |         |         |         |
 7+40      2.5106     4.58  Q       V |         |         |         |
 7+45      2.5423     4.60  Q       V |         |         |         |
 7+50      2.5741     4.61  Q       V |         |         |         |
 7+55      2.6060     4.63  Q       V |         |         |         |
 8+ 0      2.6380     4.65  Q       V |         |         |         |
 8+ 5      2.6701     4.66  Q       V |         |         |         |
 8+10      2.7023     4.68  Q       V |         |         |         |
 8+15      2.7347     4.70  Q       V |         |         |         |
 8+20      2.7672     4.72  Q        V|         |         |         |
 8+25      2.7998     4.74  Q        V|         |         |         |
 8+30      2.8326     4.76  Q        V|         |         |         |
 8+35      2.8654     4.77  Q        V|         |         |         |
 8+40      2.8985     4.79  Q        V|         |         |         |
 8+45      2.9316     4.81  Q        V|         |         |         |
 8+50      2.9649     4.83  Q        V|         |         |         |
 8+55      2.9983     4.85  Q        V|         |         |         |
 9+ 0      3.0319     4.87  Q        V|         |         |         |
 9+ 5      3.0656     4.89  Q         V         |         |         |
 9+10      3.0994     4.92  Q         V         |         |         |
 9+15      3.1334     4.94  Q         V         |         |         |
 9+20      3.1676     4.96  Q         V         |         |         |
 9+25      3.2019     4.98  Q         V         |         |         |
 9+30      3.2363     5.00  |Q        V         |         |         |
 9+35      3.2709     5.03  |Q        V         |         |         |
 9+40      3.3057     5.05  |Q        V         |         |         |
 9+45      3.3406     5.07  |Q        V         |         |         |
 9+50      3.3757     5.10  |Q        |V        |         |         |
 9+55      3.4110     5.12  |Q        |V        |         |         |
10+ 0      3.4464     5.15  |Q        |V        |         |         |
10+ 5      3.4821     5.17  |Q        |V        |         |         |
10+10      3.5179     5.20  |Q        |V        |         |         |
10+15      3.5538     5.22  |Q        |V        |         |         |
10+20      3.5900     5.25  |Q        |V        |         |         |
10+25      3.6263     5.28  |Q        |V        |         |         |
10+30      3.6629     5.31  |Q        |V        |         |         |
10+35      3.6996     5.33  |Q        | V       |         |         |
10+40      3.7366     5.36  |Q        | V       |         |         |
```

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10+45      3.7737     5.39  |Q        | V       |         |         |
10+50      3.8111     5.42  |Q        | V       |         |         |
10+55      3.8487     5.45  |Q        | V       |         |         |
11+ 0      3.8864     5.49  |Q        | V       |         |         |
11+ 5      3.9245     5.52  |Q        | V       |         |         |
11+10      3.9627     5.55  |Q        | V       |         |         |
11+15      4.0012     5.59  |Q        |  V      |         |         |
11+20      4.0399     5.62  |Q        |  V      |         |         |
11+25      4.0788     5.66  |Q        |  V      |         |         |
11+30      4.1180     5.69  |Q        |  V      |         |         |
11+35      4.1575     5.73  |Q        |  V      |         |         |
11+40      4.1972     5.77  |Q        |  V      |         |         |
11+45      4.2372     5.81  |Q        |  V      |         |         |
11+50      4.2775     5.85  |Q        |  V      |         |         |
11+55      4.3180     5.89  |Q        |   V     |         |         |
12+ 0      4.3589     5.93  |Q        |   V     |         |         |
12+ 5      4.4000     5.96  |Q        |   V     |         |         |
12+10      4.4409     5.95  |Q        |   V     |         |         |
12+15      4.4819     5.95  |Q        |   V     |         |         |
12+20      4.5232     5.99  |Q        |   V     |         |         |
12+25      4.5647     6.02  |Q        |   V     |         |         |
12+30      4.6065     6.07  |Q        |    V    |         |         |
12+35      4.6486     6.12  |Q        |    V    |         |         |
12+40      4.6912     6.18  |Q        |    V    |         |         |
12+45      4.7341     6.23  |Q        |    V    |         |         |
12+50      4.7774     6.29  |Q        |    V    |         |         |
12+55      4.8211     6.35  |Q        |    V    |         |         |
13+ 0      4.8653     6.41  |Q        |    V    |         |         |
13+ 5      4.9099     6.47  |Q        |     V   |         |         |
13+10      4.9550     6.54  |Q        |     V   |         |         |
13+15      5.0005     6.61  |Q        |     V   |         |         |
13+20      5.0465     6.69  |Q        |     V   |         |         |
13+25      5.0931     6.76  |Q        |     V   |         |         |
13+30      5.1402     6.84  |Q        |     V   |         |         |
13+35      5.1878     6.92  |Q        |     V   |         |         |
13+40      5.2360     7.01  |Q        |      V  |         |         |
13+45      5.2849     7.09  |Q        |      V  |         |         |
13+50      5.3344     7.19  |Q        |      V  |         |         |
13+55      5.3845     7.28  |Q        |      V  |         |         |
14+ 0      5.4354     7.39  |Q        |      V  |         |         |
14+ 5      5.4870     7.49  |Q        |      V  |         |         |
14+10      5.5395     7.62  |Q        |       V |         |         |
14+15      5.5928     7.74  |Q        |       V |         |         |
14+20      5.6471     7.88  |Q        |       V |         |         |
14+25      5.7023     8.01  |Q        |       V |         |         |
14+30      5.7585     8.16  |Q        |       V |         |         |
14+35      5.8157     8.31  |Q        |        V|         |         |
14+40      5.8742     8.49  |Q        |        V|         |         |
14+45      5.9338     8.66  |Q        |        V|         |         |
14+50      5.9948     8.86  |Q        |        V|         |         |
14+55      6.0572     9.06  |Q        |        V|         |         |
15+ 0      6.1213     9.30  |Q        |         V         |         |
15+ 5      6.1871     9.55  |Q        |         V         |         |
15+10      6.2549     9.84  |Q        |         V         |         |
15+15      6.3247    10.14  | Q       |         V         |         |
15+20      6.3971    10.52  | Q       |         V         |         |
15+25      6.4693    10.48  | Q       |         |V        |         |
15+30      6.5279     8.51  |Q        |         |V        |         |
15+35      6.5777     7.24  |Q        |         |V        |         |
15+40      6.6277     7.26  |Q        |         |V        |         |
15+45      6.6807     7.69  |Q        |         |V        |         |
15+50      6.7409     8.74  |Q        |         | V       |         |
15+55      6.8125    10.40  | Q       |         | V       |         |
16+ 0      6.9125    14.52  | Q       |         | V       |         |
16+ 5      7.1601    35.96  |      Q  |         |  V      |         |
16+10      7.8725   103.43  |         |         Q    V    |         |
16+15      8.3975    76.23  |         |    Q    |      V  |         |
16+20      8.6392    35.10  |      Q  |         |       V |         |
16+25      8.7939    22.47  |   Q     |         |       V |         |
16+30      8.9101    16.87  |  Q      |         |        V|         |
16+35      9.0002    13.08  | Q       |         |        V|         |
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16+40      9.0796    11.52  | Q       |         |        V|         |
16+45      9.1540    10.81  | Q       |         |        V|         |
16+50      9.2229    10.00  |Q        |         |         V         |
16+55      9.2856     9.11  |Q        |         |         V         |
17+ 0      9.3444     8.54  |Q        |         |         V         |
17+ 5      9.4010     8.22  |Q        |         |         V         |
17+10      9.4557     7.93  |Q        |         |         V         |
17+15      9.5085     7.67  |Q        |         |         |V        |
17+20      9.5598     7.44  |Q        |         |         |V        |
17+25      9.6096     7.23  |Q        |         |         |V        |
17+30      9.6581     7.04  |Q        |         |         |V        |
17+35      9.7054     6.87  |Q        |         |         |V        |
17+40      9.7516     6.71  |Q        |         |         |V        |
17+45      9.7969     6.57  |Q        |         |         | V       |
17+50      9.8412     6.44  |Q        |         |         | V       |
17+55      9.8846     6.31  |Q        |         |         | V       |
18+ 0      9.9273     6.20  |Q        |         |         | V       |
18+ 5      9.9693     6.10  |Q        |         |         | V       |
18+10     10.0110     6.05  |Q        |         |         | V       |
18+15     10.0523     6.00  |Q        |         |         | V       |
18+20     10.0932     5.93  |Q        |         |         | V       |
18+25     10.1335     5.85  |Q        |         |         |  V      |
18+30     10.1733     5.78  |Q        |         |         |  V      |
18+35     10.2125     5.70  |Q        |         |         |  V      |
18+40     10.2513     5.63  |Q        |         |         |  V      |
18+45     10.2896     5.56  |Q        |         |         |  V      |
18+50     10.3275     5.50  |Q        |         |         |  V      |
18+55     10.3649     5.43  |Q        |         |         |  V      |
19+ 0     10.4019     5.37  |Q        |         |         |   V     |
19+ 5     10.4385     5.32  |Q        |         |         |   V     |
19+10     10.4748     5.26  |Q        |         |         |   V     |
19+15     10.5106     5.21  |Q        |         |         |   V     |
19+20     10.5461     5.15  |Q        |         |         |   V     |
19+25     10.5813     5.10  |Q        |         |         |   V     |
19+30     10.6161     5.06  |Q        |         |         |   V     |
19+35     10.6506     5.01  |Q        |         |         |   V     |
19+40     10.6848     4.96  Q         |         |         |   V     |
19+45     10.7187     4.92  Q         |         |         |    V    |
19+50     10.7523     4.88  Q         |         |         |    V    |
19+55     10.7856     4.84  Q         |         |         |    V    |
20+ 0     10.8187     4.80  Q         |         |         |    V    |
20+ 5     10.8515     4.76  Q         |         |         |    V    |
20+10     10.8840     4.72  Q         |         |         |    V    |
20+15     10.9163     4.69  Q         |         |         |    V    |
20+20     10.9483     4.65  Q         |         |         |    V    |
20+25     10.9801     4.62  Q         |         |         |    V    |
20+30     11.0117     4.58  Q         |         |         |     V   |
20+35     11.0430     4.55  Q         |         |         |     V   |
20+40     11.0742     4.52  Q         |         |         |     V   |
20+45     11.1051     4.49  Q         |         |         |     V   |
20+50     11.1358     4.46  Q         |         |         |     V   |
20+55     11.1663     4.43  Q         |         |         |     V   |
21+ 0     11.1967     4.40  Q         |         |         |     V   |
21+ 5     11.2268     4.37  Q         |         |         |     V   |
21+10     11.2567     4.35  Q         |         |         |     V   |
21+15     11.2865     4.32  Q         |         |         |     V   |
21+20     11.3161     4.29  Q         |         |         |     V   |
21+25     11.3455     4.27  Q         |         |         |      V  |
21+30     11.3747     4.24  Q         |         |         |      V  |
21+35     11.4038     4.22  Q         |         |         |      V  |
21+40     11.4327     4.20  Q         |         |         |      V  |
21+45     11.4614     4.17  Q         |         |         |      V  |
21+50     11.4900     4.15  Q         |         |         |      V  |
21+55     11.5184     4.13  Q         |         |         |      V  |
22+ 0     11.5467     4.11  Q         |         |         |      V  |
22+ 5     11.5748     4.08  Q         |         |         |      V  |
22+10     11.6028     4.06  Q         |         |         |      V  |
22+15     11.6307     4.04  Q         |         |         |       V |
22+20     11.6584     4.02  Q         |         |         |       V |
22+25     11.6859     4.00  Q         |         |         |       V |
22+30     11.7134     3.98  Q         |         |         |       V |
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   22+35      11.7407      3.96  Q          |          |          |       V |
   22+40      11.7678      3.94  Q          |          |          |       V |
   22+45      11.7949      3.93  Q          |          |          |       V |
   22+50      11.8218      3.91  Q          |          |          |       V |
   22+55      11.8486      3.89  Q          |          |          |       V |
   23+ 0      11.8753      3.87  Q          |          |          |       V |
   23+ 5      11.9018      3.86  Q          |          |          |       V |
   23+10      11.9282      3.84  Q          |          |          |       V |
   23+15      11.9546      3.82  Q          |          |          |        V|
   23+20      11.9808      3.80  Q          |          |          |        V|
   23+25      12.0069      3.79  Q          |          |          |        V|
   23+30      12.0328      3.77  Q          |          |          |        V|
   23+35      12.0587      3.76  Q          |          |          |        V|
   23+40      12.0845      3.74  Q          |          |          |        V|
   23+45      12.1101      3.73  Q          |          |          |        V|
   23+50      12.1357      3.71  Q          |          |          |        V|
   23+55      12.1612      3.70  Q          |          |          |        V|
   24+ 0      12.1865      3.68  Q          |          |          |        V|
   24+ 5      12.2100      3.41  Q          |          |          |        V|
   24+10      12.2232      1.92  Q          |          |          |        V|
   24+15      12.2290      0.84  Q          |          |          |        V|
   24+20      12.2321      0.44  Q          |          |          |        V|
   24+25      12.2336      0.22  Q          |          |          |        V|
   24+30      12.2343      0.10  Q          |          |          |        V|
   24+35      12.2346      0.06  Q          |          |          |        V|
   24+40      12.2349      0.03  Q          |          |          |        V|
   24+45      12.2350      0.01  Q          |          |          |        V|
   24+50      12.2350      0.00  Q          |          |          |         V
-------------------------------------------------------------------------
```

Area 'A' – 25 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

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                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
25 YEAR 24 HOUR STORM
DECEMBER 16, 2024
----------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            43.08           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            43.08           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            43.08          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            43.08           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            43.08           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            43.08          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 36.7      36.7         43.08      1.000     0.945    0.610    0.577

Area-averaged adjusted loss rate Fm (In/Hr) =  0.577

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
26.28	0.610	36.7	36.7	17.25	0.155
16.80	0.390	98.0	98.0	0.20	0.974

Area-averaged catchment yield fraction, Y = 0.474
Area-averaged low loss fraction, Yb = 0.526
User entry of time of concentration = 0.150 (hours)
++
Watershed area = 43.08(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.4444
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.577(In/Hr)
Average low loss rate fraction (Yb) = 0.526 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 43.08(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.568(In)
30-minute factor = 0.998 Adjusted rainfall = 0.972(In)
1-hour factor = 0.998 Adjusted rainfall = 1.197(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 521.00 (CFS))	
1	7.065	36.808
2	47.670	211.553
3	76.988	152.744
4	87.984	57.293
5	94.086	31.790
6	97.295	16.719
7	98.498	6.265
8	99.120	3.241
9	99.604	2.523
10	99.910	1.595
11	100.000	0.467

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5678	0.5678
2	0.6990	0.1312
3	0.7894	0.0904
4	0.8606	0.0712
5	0.9202	0.0596
6	0.9719	0.0517
7	1.0179	0.0460
8	1.0595	0.0416
9	1.0976	0.0381
10	1.1329	0.0352
11	1.1657	0.0329
12	1.1965	0.0308
13	1.2572	0.0606
14	1.3160	0.0589

15	1.3733	0.0573
16	1.4291	0.0558
17	1.4836	0.0545
18	1.5369	0.0533
19	1.5891	0.0522
20	1.6402	0.0511
21	1.6904	0.0502
22	1.7396	0.0493
23	1.7880	0.0484
24	1.8357	0.0476
25	1.8825	0.0469
26	1.9286	0.0461
27	1.9741	0.0455
28	2.0189	0.0448
29	2.0632	0.0442
30	2.1068	0.0436
31	2.1499	0.0431
32	2.1924	0.0426
33	2.2345	0.0421
34	2.2761	0.0416
35	2.3172	0.0411
36	2.3578	0.0407
37	2.3980	0.0401
38	2.4377	0.0397
39	2.4770	0.0393
40	2.5159	0.0389
41	2.5545	0.0386
42	2.5927	0.0382
43	2.6305	0.0379
44	2.6680	0.0375
45	2.7052	0.0372
46	2.7421	0.0369
47	2.7787	0.0366
48	2.8150	0.0363
49	2.8509	0.0360
50	2.8866	0.0357
51	2.9221	0.0354
52	2.9572	0.0352
53	2.9921	0.0349
54	3.0268	0.0347
55	3.0612	0.0344
56	3.0953	0.0342
57	3.1293	0.0339
58	3.1630	0.0337
59	3.1965	0.0335
60	3.2297	0.0333
61	3.2628	0.0331
62	3.2956	0.0328
63	3.3283	0.0326
64	3.3607	0.0324
65	3.3930	0.0322
66	3.4250	0.0321
67	3.4569	0.0319
68	3.4886	0.0317
69	3.5201	0.0315
70	3.5514	0.0313
71	3.5826	0.0312
72	3.6136	0.0310
73	3.6472	0.0336
74	3.6807	0.0335
75	3.7140	0.0333
76	3.7472	0.0332
77	3.7802	0.0330
78	3.8131	0.0329
79	3.8458	0.0327
80	3.8784	0.0326
81	3.9109	0.0325
82	3.9433	0.0323
83	3.9755	0.0322
84	4.0076	0.0321
85	4.0395	0.0320

86	4.0714	0.0318
87	4.1031	0.0317
88	4.1347	0.0316
89	4.1662	0.0315
90	4.1976	0.0314
91	4.2288	0.0313
92	4.2600	0.0311
93	4.2910	0.0310
94	4.3219	0.0309
95	4.3527	0.0308
96	4.3834	0.0307
97	4.4140	0.0306
98	4.4445	0.0305
99	4.4749	0.0304
100	4.5052	0.0303
101	4.5354	0.0302
102	4.5655	0.0301
103	4.5955	0.0300
104	4.6254	0.0299
105	4.6552	0.0298
106	4.6849	0.0297
107	4.7145	0.0296
108	4.7441	0.0295
109	4.7735	0.0294
110	4.8029	0.0294
111	4.8322	0.0293
112	4.8613	0.0292
113	4.8904	0.0291
114	4.9194	0.0290
115	4.9484	0.0289
116	4.9772	0.0288
117	5.0060	0.0288
118	5.0347	0.0287
119	5.0633	0.0286
120	5.0918	0.0285
121	5.1202	0.0284
122	5.1486	0.0284
123	5.1769	0.0283
124	5.2051	0.0282
125	5.2333	0.0281
126	5.2613	0.0281
127	5.2893	0.0280
128	5.3172	0.0279
129	5.3451	0.0279
130	5.3729	0.0278
131	5.4006	0.0277
132	5.4282	0.0276
133	5.4558	0.0276
134	5.4833	0.0275
135	5.5107	0.0274
136	5.5381	0.0274
137	5.5654	0.0273
138	5.5926	0.0272
139	5.6198	0.0272
140	5.6469	0.0271
141	5.6740	0.0270
142	5.7010	0.0270
143	5.7279	0.0269
144	5.7547	0.0269
145	5.7815	0.0268
146	5.8083	0.0267
147	5.8350	0.0267
148	5.8616	0.0266
149	5.8881	0.0266
150	5.9146	0.0265
151	5.9411	0.0264
152	5.9675	0.0264
153	5.9938	0.0263
154	6.0200	0.0263
155	6.0463	0.0262
156	6.0724	0.0262

157	6.0985	0.0261
158	6.1246	0.0260
159	6.1506	0.0260
160	6.1765	0.0259
161	6.2024	0.0259
162	6.2282	0.0258
163	6.2540	0.0258
164	6.2798	0.0257
165	6.3054	0.0257
166	6.3311	0.0256
167	6.3566	0.0256
168	6.3822	0.0255
169	6.4076	0.0255
170	6.4331	0.0254
171	6.4585	0.0254
172	6.4838	0.0253
173	6.5091	0.0253
174	6.5343	0.0252
175	6.5595	0.0252
176	6.5846	0.0251
177	6.6097	0.0251
178	6.6348	0.0250
179	6.6598	0.0250
180	6.6847	0.0250
181	6.7096	0.0249
182	6.7345	0.0249
183	6.7593	0.0248
184	6.7841	0.0248
185	6.8088	0.0247
186	6.8335	0.0247
187	6.8581	0.0246
188	6.8827	0.0246
189	6.9073	0.0246
190	6.9318	0.0245
191	6.9563	0.0245
192	6.9807	0.0244
193	7.0051	0.0244
194	7.0294	0.0243
195	7.0537	0.0243
196	7.0780	0.0243
197	7.1022	0.0242
198	7.1264	0.0242
199	7.1505	0.0241
200	7.1746	0.0241
201	7.1987	0.0241
202	7.2227	0.0240
203	7.2467	0.0240
204	7.2707	0.0239
205	7.2946	0.0239
206	7.3184	0.0239
207	7.3423	0.0238
208	7.3661	0.0238
209	7.3898	0.0238
210	7.4135	0.0237
211	7.4372	0.0237
212	7.4609	0.0236
213	7.4845	0.0236
214	7.5080	0.0236
215	7.5316	0.0235
216	7.5551	0.0235
217	7.5785	0.0235
218	7.6020	0.0234
219	7.6254	0.0234
220	7.6487	0.0234
221	7.6720	0.0233
222	7.6953	0.0233
223	7.7186	0.0233
224	7.7418	0.0232
225	7.7650	0.0232
226	7.7881	0.0232
227	7.8112	0.0231

228	7.8343	0.0231
229	7.8574	0.0231
230	7.8804	0.0230
231	7.9034	0.0230
232	7.9263	0.0230
233	7.9493	0.0229
234	7.9721	0.0229
235	7.9950	0.0229
236	8.0178	0.0228
237	8.0406	0.0228
238	8.0634	0.0228
239	8.0861	0.0227
240	8.1088	0.0227
241	8.1315	0.0227
242	8.1541	0.0226
243	8.1767	0.0226
244	8.1993	0.0226
245	8.2218	0.0225
246	8.2443	0.0225
247	8.2668	0.0225
248	8.2893	0.0225
249	8.3117	0.0224
250	8.3341	0.0224
251	8.3564	0.0224
252	8.3788	0.0223
253	8.4011	0.0223
254	8.4234	0.0223
255	8.4456	0.0222
256	8.4678	0.0222
257	8.4900	0.0222
258	8.5122	0.0222
259	8.5343	0.0221
260	8.5564	0.0221
261	8.5785	0.0221
262	8.6006	0.0221
263	8.6226	0.0220
264	8.6446	0.0220
265	8.6665	0.0220
266	8.6885	0.0219
267	8.7104	0.0219
268	8.7323	0.0219
269	8.7541	0.0219
270	8.7760	0.0218
271	8.7978	0.0218
272	8.8196	0.0218
273	8.8413	0.0218
274	8.8631	0.0217
275	8.8848	0.0217
276	8.9064	0.0217
277	8.9281	0.0217
278	8.9497	0.0216
279	8.9713	0.0216
280	8.9929	0.0216
281	9.0144	0.0215
282	9.0359	0.0215
283	9.0574	0.0215
284	9.0789	0.0215
285	9.1004	0.0214
286	9.1218	0.0214
287	9.1432	0.0214
288	9.1646	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0112	0.0101
2	0.0214	0.0112	0.0102
3	0.0214	0.0113	0.0102
4	0.0215	0.0113	0.0102
5	0.0215	0.0113	0.0102

6	0.0215	0.0113	0.0102
7	0.0216	0.0114	0.0102
8	0.0216	0.0114	0.0103
9	0.0217	0.0114	0.0103
10	0.0217	0.0114	0.0103
11	0.0218	0.0114	0.0103
12	0.0218	0.0114	0.0103
13	0.0218	0.0115	0.0104
14	0.0219	0.0115	0.0104
15	0.0219	0.0115	0.0104
16	0.0219	0.0115	0.0104
17	0.0220	0.0116	0.0104
18	0.0220	0.0116	0.0104
19	0.0221	0.0116	0.0105
20	0.0221	0.0116	0.0105
21	0.0222	0.0116	0.0105
22	0.0222	0.0117	0.0105
23	0.0222	0.0117	0.0106
24	0.0223	0.0117	0.0106
25	0.0223	0.0117	0.0106
26	0.0224	0.0118	0.0106
27	0.0224	0.0118	0.0106
28	0.0225	0.0118	0.0107
29	0.0225	0.0118	0.0107
30	0.0225	0.0118	0.0107
31	0.0226	0.0119	0.0107
32	0.0226	0.0119	0.0107
33	0.0227	0.0119	0.0108
34	0.0227	0.0119	0.0108
35	0.0228	0.0120	0.0108
36	0.0228	0.0120	0.0108
37	0.0229	0.0120	0.0109
38	0.0229	0.0120	0.0109
39	0.0230	0.0121	0.0109
40	0.0230	0.0121	0.0109
41	0.0231	0.0121	0.0110
42	0.0231	0.0121	0.0110
43	0.0232	0.0122	0.0110
44	0.0232	0.0122	0.0110
45	0.0233	0.0122	0.0110
46	0.0233	0.0123	0.0111
47	0.0234	0.0123	0.0111
48	0.0234	0.0123	0.0111
49	0.0235	0.0123	0.0111
50	0.0235	0.0124	0.0112
51	0.0236	0.0124	0.0112
52	0.0236	0.0124	0.0112
53	0.0237	0.0125	0.0113
54	0.0238	0.0125	0.0113
55	0.0238	0.0125	0.0113
56	0.0239	0.0125	0.0113
57	0.0239	0.0126	0.0114
58	0.0240	0.0126	0.0114
59	0.0241	0.0126	0.0114
60	0.0241	0.0127	0.0114
61	0.0242	0.0127	0.0115
62	0.0242	0.0127	0.0115
63	0.0243	0.0128	0.0115
64	0.0243	0.0128	0.0116
65	0.0244	0.0128	0.0116
66	0.0245	0.0129	0.0116
67	0.0246	0.0129	0.0117
68	0.0246	0.0129	0.0117
69	0.0247	0.0130	0.0117
70	0.0247	0.0130	0.0117
71	0.0248	0.0130	0.0118
72	0.0249	0.0131	0.0118
73	0.0250	0.0131	0.0118
74	0.0250	0.0131	0.0119
75	0.0251	0.0132	0.0119
76	0.0251	0.0132	0.0119

77	0.0252	0.0133	0.0120
78	0.0253	0.0133	0.0120
79	0.0254	0.0133	0.0120
80	0.0254	0.0134	0.0121
81	0.0255	0.0134	0.0121
82	0.0256	0.0134	0.0121
83	0.0257	0.0135	0.0122
84	0.0257	0.0135	0.0122
85	0.0258	0.0136	0.0123
86	0.0259	0.0136	0.0123
87	0.0260	0.0137	0.0123
88	0.0260	0.0137	0.0124
89	0.0262	0.0137	0.0124
90	0.0262	0.0138	0.0124
91	0.0263	0.0138	0.0125
92	0.0264	0.0139	0.0125
93	0.0265	0.0139	0.0126
94	0.0266	0.0140	0.0126
95	0.0267	0.0140	0.0127
96	0.0267	0.0141	0.0127
97	0.0269	0.0141	0.0127
98	0.0269	0.0141	0.0128
99	0.0270	0.0142	0.0128
100	0.0271	0.0142	0.0129
101	0.0272	0.0143	0.0129
102	0.0273	0.0143	0.0130
103	0.0274	0.0144	0.0130
104	0.0275	0.0145	0.0130
105	0.0276	0.0145	0.0131
106	0.0277	0.0146	0.0131
107	0.0279	0.0146	0.0132
108	0.0279	0.0147	0.0132
109	0.0281	0.0148	0.0133
110	0.0281	0.0148	0.0134
111	0.0283	0.0149	0.0134
112	0.0284	0.0149	0.0135
113	0.0285	0.0150	0.0135
114	0.0286	0.0150	0.0136
115	0.0288	0.0151	0.0136
116	0.0288	0.0152	0.0137
117	0.0290	0.0152	0.0138
118	0.0291	0.0153	0.0138
119	0.0293	0.0154	0.0139
120	0.0294	0.0154	0.0139
121	0.0295	0.0155	0.0140
122	0.0296	0.0156	0.0141
123	0.0298	0.0157	0.0141
124	0.0299	0.0157	0.0142
125	0.0301	0.0158	0.0143
126	0.0302	0.0159	0.0143
127	0.0304	0.0160	0.0144
128	0.0305	0.0160	0.0145
129	0.0307	0.0161	0.0146
130	0.0308	0.0162	0.0146
131	0.0310	0.0163	0.0147
132	0.0311	0.0164	0.0148
133	0.0314	0.0165	0.0149
134	0.0315	0.0165	0.0149
135	0.0317	0.0167	0.0150
136	0.0318	0.0167	0.0151
137	0.0321	0.0169	0.0152
138	0.0322	0.0169	0.0153
139	0.0325	0.0171	0.0154
140	0.0326	0.0171	0.0155
141	0.0329	0.0173	0.0156
142	0.0330	0.0174	0.0157
143	0.0333	0.0175	0.0158
144	0.0335	0.0176	0.0159
145	0.0310	0.0163	0.0147
146	0.0312	0.0164	0.0148
147	0.0315	0.0166	0.0150

148	0.0317	0.0167	0.0150
149	0.0321	0.0168	0.0152
150	0.0322	0.0169	0.0153
151	0.0326	0.0172	0.0155
152	0.0328	0.0173	0.0156
153	0.0333	0.0175	0.0158
154	0.0335	0.0176	0.0159
155	0.0339	0.0178	0.0161
156	0.0342	0.0180	0.0162
157	0.0347	0.0182	0.0164
158	0.0349	0.0183	0.0166
159	0.0354	0.0186	0.0168
160	0.0357	0.0188	0.0169
161	0.0363	0.0191	0.0172
162	0.0366	0.0192	0.0173
163	0.0372	0.0195	0.0176
164	0.0375	0.0197	0.0178
165	0.0382	0.0201	0.0181
166	0.0386	0.0203	0.0183
167	0.0393	0.0207	0.0187
168	0.0397	0.0209	0.0188
169	0.0407	0.0214	0.0193
170	0.0411	0.0216	0.0195
171	0.0421	0.0221	0.0200
172	0.0426	0.0224	0.0202
173	0.0436	0.0229	0.0207
174	0.0442	0.0232	0.0210
175	0.0455	0.0239	0.0216
176	0.0461	0.0242	0.0219
177	0.0476	0.0250	0.0226
178	0.0484	0.0254	0.0230
179	0.0502	0.0264	0.0238
180	0.0511	0.0269	0.0243
181	0.0533	0.0280	0.0253
182	0.0545	0.0286	0.0259
183	0.0573	0.0301	0.0272
184	0.0589	0.0309	0.0279
185	0.0308	0.0162	0.0146
186	0.0329	0.0173	0.0156
187	0.0381	0.0200	0.0181
188	0.0416	0.0219	0.0197
189	0.0517	0.0272	0.0245
190	0.0596	0.0313	0.0283
191	0.0904	0.0475	0.0429
192	0.1312	0.0480	0.0832
193	0.5678	0.0480	0.5197
194	0.0712	0.0374	0.0338
195	0.0460	0.0242	0.0218
196	0.0352	0.0185	0.0167
197	0.0606	0.0319	0.0288
198	0.0558	0.0293	0.0265
199	0.0522	0.0274	0.0248
200	0.0493	0.0259	0.0234
201	0.0469	0.0246	0.0222
202	0.0448	0.0236	0.0213
203	0.0431	0.0226	0.0204
204	0.0416	0.0218	0.0197
205	0.0401	0.0211	0.0190
206	0.0389	0.0205	0.0185
207	0.0379	0.0199	0.0180
208	0.0369	0.0194	0.0175
209	0.0360	0.0189	0.0171
210	0.0352	0.0185	0.0167
211	0.0344	0.0181	0.0163
212	0.0337	0.0177	0.0160
213	0.0331	0.0174	0.0157
214	0.0324	0.0171	0.0154
215	0.0319	0.0168	0.0151
216	0.0313	0.0165	0.0149
217	0.0336	0.0177	0.0159
218	0.0332	0.0174	0.0157

219	0.0327	0.0172	0.0155
220	0.0323	0.0170	0.0153
221	0.0320	0.0168	0.0152
222	0.0316	0.0166	0.0150
223	0.0313	0.0164	0.0148
224	0.0309	0.0162	0.0147
225	0.0306	0.0161	0.0145
226	0.0303	0.0159	0.0144
227	0.0300	0.0158	0.0142
228	0.0297	0.0156	0.0141
229	0.0294	0.0155	0.0140
230	0.0292	0.0153	0.0138
231	0.0289	0.0152	0.0137
232	0.0287	0.0151	0.0136
233	0.0284	0.0149	0.0135
234	0.0282	0.0148	0.0134
235	0.0280	0.0147	0.0133
236	0.0278	0.0146	0.0132
237	0.0276	0.0145	0.0131
238	0.0274	0.0144	0.0130
239	0.0272	0.0143	0.0129
240	0.0270	0.0142	0.0128
241	0.0268	0.0141	0.0127
242	0.0266	0.0140	0.0126
243	0.0264	0.0139	0.0125
244	0.0263	0.0138	0.0125
245	0.0261	0.0137	0.0124
246	0.0259	0.0136	0.0123
247	0.0258	0.0136	0.0122
248	0.0256	0.0135	0.0122
249	0.0255	0.0134	0.0121
250	0.0253	0.0133	0.0120
251	0.0252	0.0132	0.0119
252	0.0250	0.0132	0.0119
253	0.0249	0.0131	0.0118
254	0.0248	0.0130	0.0118
255	0.0246	0.0130	0.0117
256	0.0245	0.0129	0.0116
257	0.0244	0.0128	0.0116
258	0.0243	0.0128	0.0115
259	0.0241	0.0127	0.0115
260	0.0240	0.0126	0.0114
261	0.0239	0.0126	0.0113
262	0.0238	0.0125	0.0113
263	0.0237	0.0124	0.0112
264	0.0236	0.0124	0.0112
265	0.0235	0.0123	0.0111
266	0.0234	0.0123	0.0111
267	0.0233	0.0122	0.0110
268	0.0232	0.0122	0.0110
269	0.0231	0.0121	0.0109
270	0.0230	0.0121	0.0109
271	0.0229	0.0120	0.0108
272	0.0228	0.0120	0.0108
273	0.0227	0.0119	0.0108
274	0.0226	0.0119	0.0107
275	0.0225	0.0118	0.0107
276	0.0224	0.0118	0.0106
277	0.0223	0.0117	0.0106
278	0.0222	0.0117	0.0105
279	0.0221	0.0116	0.0105
280	0.0221	0.0116	0.0105
281	0.0220	0.0115	0.0104
282	0.0219	0.0115	0.0104
283	0.0218	0.0115	0.0103
284	0.0217	0.0114	0.0103
285	0.0217	0.0114	0.0103
286	0.0216	0.0113	0.0102
287	0.0215	0.0113	0.0102
288	0.0214	0.0113	0.0102

```
      ----------------------------------------------------------------------
      Total soil rain loss =      4.55(In)
      Total effective rainfall =      4.62(In)
      Peak flow rate in flood hydrograph =    127.92(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       50.0     100.0     150.0     200.0
----------------------------------------------------------------------------
  0+ 5       0.0026      0.37  Q          |         |         |         |
  0+10       0.0199      2.52  Q          |         |         |         |
  0+15       0.0480      4.07  Q          |         |         |         |
  0+20       0.0801      4.66  Q          |         |         |         |
  0+25       0.1144      4.99  Q          |         |         |         |
  0+30       0.1500      5.17  VQ         |         |         |         |
  0+35       0.1861      5.24  VQ         |         |         |         |
  0+40       0.2225      5.28  VQ         |         |         |         |
  0+45       0.2591      5.32  VQ         |         |         |         |
  0+50       0.2959      5.34  VQ         |         |         |         |
  0+55       0.3328      5.36  VQ         |         |         |         |
  1+ 0       0.3698      5.37  VQ         |         |         |         |
  1+ 5       0.4068      5.38  VQ         |         |         |         |
  1+10       0.4439      5.39  |Q         |         |         |         |
  1+15       0.4810      5.40  |Q         |         |         |         |
  1+20       0.5183      5.41  |Q         |         |         |         |
  1+25       0.5556      5.42  |Q         |         |         |         |
  1+30       0.5929      5.43  |Q         |         |         |         |
  1+35       0.6304      5.44  |Q         |         |         |         |
  1+40       0.6679      5.45  |Q         |         |         |         |
  1+45       0.7055      5.46  |Q         |         |         |         |
  1+50       0.7431      5.47  |Q         |         |         |         |
  1+55       0.7809      5.48  |Q         |         |         |         |
  2+ 0       0.8187      5.49  |Q         |         |         |         |
  2+ 5       0.8565      5.50  |QV        |         |         |         |
  2+10       0.8945      5.51  |QV        |         |         |         |
  2+15       0.9325      5.52  |QV        |         |         |         |
  2+20       0.9706      5.53  |QV        |         |         |         |
  2+25       1.0087      5.54  |QV        |         |         |         |
  2+30       1.0470      5.55  |QV        |         |         |         |
  2+35       1.0853      5.56  |QV        |         |         |         |
  2+40       1.1237      5.58  |QV        |         |         |         |
  2+45       1.1622      5.59  |QV        |         |         |         |
  2+50       1.2007      5.60  |QV        |         |         |         |
  2+55       1.2394      5.61  |QV        |         |         |         |
  3+ 0       1.2781      5.62  |Q V       |         |         |         |
  3+ 5       1.3169      5.63  |Q V       |         |         |         |
  3+10       1.3558      5.64  |Q V       |         |         |         |
  3+15       1.3947      5.66  |Q V       |         |         |         |
  3+20       1.4337      5.67  |Q V       |         |         |         |
  3+25       1.4729      5.68  |Q V       |         |         |         |
  3+30       1.5121      5.69  |Q V       |         |         |         |
  3+35       1.5514      5.70  |Q V       |         |         |         |
  3+40       1.5907      5.72  |Q V       |         |         |         |
  3+45       1.6302      5.73  |Q V       |         |         |         |
  3+50       1.6698      5.74  |Q  V      |         |         |         |
  3+55       1.7094      5.76  |Q  V      |         |         |         |
  4+ 0       1.7491      5.77  |Q  V      |         |         |         |
  4+ 5       1.7889      5.78  |Q  V      |         |         |         |
  4+10       1.8288      5.79  |Q  V      |         |         |         |
  4+15       1.8688      5.81  |Q  V      |         |         |         |
  4+20       1.9089      5.82  |Q  V      |         |         |         |
  4+25       1.9491      5.83  |Q  V      |         |         |         |
  4+30       1.9894      5.85  |Q  V      |         |         |         |
  4+35       2.0298      5.86  |Q  V      |         |         |         |
  4+40       2.0702      5.88  |Q  V      |         |         |         |
  4+45       2.1108      5.89  |Q   V     |         |         |         |
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 4+50       2.1514      5.90  |Q   V    |          |          |          |
 4+55       2.1922      5.92  |Q   V    |          |          |          |
 5+ 0       2.2331      5.93  |Q   V    |          |          |          |
 5+ 5       2.2740      5.95  |Q   V    |          |          |          |
 5+10       2.3151      5.96  |Q   V    |          |          |          |
 5+15       2.3562      5.98  |Q   V    |          |          |          |
 5+20       2.3975      5.99  |Q   V    |          |          |          |
 5+25       2.4389      6.01  |Q   V    |          |          |          |
 5+30       2.4803      6.02  |Q   V    |          |          |          |
 5+35       2.5219      6.04  |Q    V   |          |          |          |
 5+40       2.5636      6.05  |Q    V   |          |          |          |
 5+45       2.6054      6.07  |Q    V   |          |          |          |
 5+50       2.6473      6.08  |Q    V   |          |          |          |
 5+55       2.6893      6.10  |Q    V   |          |          |          |
 6+ 0       2.7314      6.12  |Q    V   |          |          |          |
 6+ 5       2.7737      6.13  |Q    V   |          |          |          |
 6+10       2.8160      6.15  |Q    V   |          |          |          |
 6+15       2.8585      6.17  |Q    V   |          |          |          |
 6+20       2.9011      6.18  |Q     V  |          |          |          |
 6+25       2.9438      6.20  |Q     V  |          |          |          |
 6+30       2.9866      6.22  |Q     V  |          |          |          |
 6+35       3.0296      6.24  |Q     V  |          |          |          |
 6+40       3.0727      6.25  |Q     V  |          |          |          |
 6+45       3.1159      6.27  |Q     V  |          |          |          |
 6+50       3.1592      6.29  |Q     V  |          |          |          |
 6+55       3.2026      6.31  |Q     V  |          |          |          |
 7+ 0       3.2462      6.33  |Q     V  |          |          |          |
 7+ 5       3.2899      6.35  |Q     V  |          |          |          |
 7+10       3.3338      6.37  |Q      V |          |          |          |
 7+15       3.3777      6.38  |Q      V |          |          |          |
 7+20       3.4218      6.40  |Q      V |          |          |          |
 7+25       3.4661      6.42  |Q      V |          |          |          |
 7+30       3.5105      6.44  |Q      V |          |          |          |
 7+35       3.5550      6.46  |Q      V |          |          |          |
 7+40       3.5997      6.49  |Q      V |          |          |          |
 7+45       3.6445      6.51  |Q      V |          |          |          |
 7+50       3.6894      6.53  |Q      V |          |          |          |
 7+55       3.7345      6.55  |Q       V|          |          |          |
 8+ 0       3.7798      6.57  |Q       V|          |          |          |
 8+ 5       3.8252      6.59  |Q       V|          |          |          |
 8+10       3.8707      6.62  |Q       V|          |          |          |
 8+15       3.9164      6.64  |Q       V|          |          |          |
 8+20       3.9623      6.66  |Q       V|          |          |          |
 8+25       4.0083      6.68  |Q       V|          |          |          |
 8+30       4.0545      6.71  |Q       V|          |          |          |
 8+35       4.1009      6.73  |Q       V|          |          |          |
 8+40       4.1474      6.76  |Q        V          |          |          |
 8+45       4.1941      6.78  |Q        V          |          |          |
 8+50       4.2410      6.81  |Q        V          |          |          |
 8+55       4.2880      6.83  |Q        V          |          |          |
 9+ 0       4.3353      6.86  |Q        V          |          |          |
 9+ 5       4.3827      6.88  |Q        V          |          |          |
 9+10       4.4302      6.91  |Q        V          |          |          |
 9+15       4.4780      6.94  |Q        V          |          |          |
 9+20       4.5260      6.96  |Q        V          |          |          |
 9+25       4.5741      6.99  |Q        |V         |          |          |
 9+30       4.6225      7.02  |Q        |V         |          |          |
 9+35       4.6710      7.05  |Q        |V         |          |          |
 9+40       4.7198      7.08  |Q        |V         |          |          |
 9+45       4.7687      7.11  |Q        |V         |          |          |
 9+50       4.8179      7.14  |Q        |V         |          |          |
 9+55       4.8673      7.17  |Q        |V         |          |          |
10+ 0       4.9168      7.20  |Q        |V         |          |          |
10+ 5       4.9667      7.23  |Q        |V         |          |          |
10+10       5.0167      7.27  |Q        | V        |          |          |
10+15       5.0670      7.30  |Q        | V        |          |          |
10+20       5.1175      7.33  |Q        | V        |          |          |
10+25       5.1682      7.37  |Q        | V        |          |          |
10+30       5.2192      7.40  |Q        | V        |          |          |
10+35       5.2704      7.44  |Q        | V        |          |          |
10+40       5.3218      7.47  |Q        | V        |          |          |
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10+45      5.3736     7.51  |Q        | V       |         |         |
10+50      5.4256     7.55  |Q        |  V      |         |         |
10+55      5.4778     7.59  |Q        |  V      |         |         |
11+ 0      5.5303     7.63  |Q        |  V      |         |         |
11+ 5      5.5831     7.67  |Q        |  V      |         |         |
11+10      5.6362     7.71  |Q        |  V      |         |         |
11+15      5.6896     7.75  |Q        |  V      |         |         |
11+20      5.7433     7.79  |Q        |  V      |         |         |
11+25      5.7973     7.84  |Q        |  V      |         |         |
11+30      5.8516     7.88  |Q        |   V     |         |         |
11+35      5.9062     7.93  |Q        |   V     |         |         |
11+40      5.9611     7.98  |Q        |   V     |         |         |
11+45      6.0164     8.02  |Q        |   V     |         |         |
11+50      6.0720     8.08  |Q        |   V     |         |         |
11+55      6.1280     8.13  |Q        |   V     |         |         |
12+ 0      6.1843     8.18  |Q        |   V     |         |         |
12+ 5      6.2407     8.18  |Q        |    V    |         |         |
12+10      6.2955     7.96  |Q        |    V    |         |         |
12+15      6.3493     7.82  |Q        |    V    |         |         |
12+20      6.4031     7.81  |Q        |    V    |         |         |
12+25      6.4570     7.83  |Q        |    V    |         |         |
12+30      6.5112     7.87  |Q        |    V    |         |         |
12+35      6.5658     7.93  |Q        |    V    |         |         |
12+40      6.6209     8.00  |Q        |    V    |         |         |
12+45      6.6765     8.07  |Q        |     V   |         |         |
12+50      6.7326     8.14  |Q        |     V   |         |         |
12+55      6.7891     8.22  |Q        |     V   |         |         |
13+ 0      6.8463     8.30  |Q        |     V   |         |         |
13+ 5      6.9040     8.38  |Q        |     V   |         |         |
13+10      6.9624     8.47  |Q        |     V   |         |         |
13+15      7.0213     8.56  |Q        |     V   |         |         |
13+20      7.0810     8.66  |Q        |      V  |         |         |
13+25      7.1412     8.75  |Q        |      V  |         |         |
13+30      7.2022     8.86  |Q        |      V  |         |         |
13+35      7.2639     8.96  |Q        |      V  |         |         |
13+40      7.3264     9.07  |Q        |      V  |         |         |
13+45      7.3897     9.19  |Q        |      V  |         |         |
13+50      7.4538     9.31  |Q        |      V  |         |         |
13+55      7.5188     9.44  |Q        |       V |         |         |
14+ 0      7.5847     9.58  |Q        |       V |         |         |
14+ 5      7.6516     9.71  |Q        |       V |         |         |
14+10      7.7197     9.88  |Q        |       V |         |         |
14+15      7.7888    10.04  | Q       |       V |         |         |
14+20      7.8591    10.21  | Q       |       V |         |         |
14+25      7.9306    10.39  | Q       |        V|         |         |
14+30      8.0035    10.58  | Q       |        V|         |         |
14+35      8.0778    10.78  | Q       |        V|         |         |
14+40      8.1536    11.01  | Q       |        V|         |         |
14+45      8.2309    11.23  | Q       |        V|         |         |
14+50      8.3101    11.50  | Q       |         V         |         |
14+55      8.3911    11.76  | Q       |         V         |         |
15+ 0      8.4743    12.08  | Q       |         V         |         |
15+ 5      8.5596    12.39  | Q       |         V         |         |
15+10      8.6477    12.78  | Q       |         V         |         |
15+15      8.7384    13.17  | Q       |         |V        |         |
15+20      8.8325    13.66  | Q       |         |V        |         |
15+25      8.9262    13.61  | Q       |         |V        |         |
15+30      9.0024    11.07  | Q       |         |V        |         |
15+35      9.0674     9.44  |Q        |         |V        |         |
15+40      9.1326     9.47  |Q        |         | V       |         |
15+45      9.2017    10.03  | Q       |         | V       |         |
15+50      9.2803    11.40  | Q       |         | V       |         |
15+55      9.3738    13.58  | Q       |         | V       |         |
16+ 0      9.5051    19.06  |  Q      |         | V       |         |
16+ 5      9.8237    46.27  |         Q|         |  V      |         |
16+10     10.7047   127.92  |          |         |    Q    |         |
16+15     11.3537    94.23  |          |       Q |      V  |         |
16+20     11.6558    43.87  |        Q |         |       V |         |
16+25     11.8503    28.24  |    Q     |         |       V |         |
16+30     11.9978    21.41  |   Q      |         |       V |         |
16+35     12.1136    16.81  |  Q       |         |        V|         |
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16+40      12.2160     14.87  | Q       |         |        V|         |
16+45      12.3122     13.96  | Q       |         |        V|         |
16+50      12.4012     12.92  | Q       |         |        V|         |
16+55      12.4825     11.80  | Q       |         |         V         |
17+ 0      12.5588     11.08  | Q       |         |         V         |
17+ 5      12.6322     10.66  | Q       |         |         V         |
17+10      12.7030     10.29  | Q       |         |         V         |
17+15      12.7715      9.95  |Q        |         |         V         |
17+20      12.8379      9.64  |Q        |         |         V         |
17+25      12.9025      9.37  |Q        |         |         |V        |
17+30      12.9653      9.12  |Q        |         |         |V        |
17+35      13.0266      8.90  |Q        |         |         |V        |
17+40      13.0864      8.69  |Q        |         |         |V        |
17+45      13.1450      8.51  |Q        |         |         |V        |
17+50      13.2024      8.33  |Q        |         |         |V        |
17+55      13.2587      8.17  |Q        |         |         |V        |
18+ 0      13.3139      8.02  |Q        |         |         | V       |
18+ 5      13.3685      7.93  |Q        |         |         | V       |
18+10      13.4241      8.07  |Q        |         |         | V       |
18+15      13.4802      8.15  |Q        |         |         | V       |
18+20      13.5361      8.12  |Q        |         |         | V       |
18+25      13.5916      8.05  |Q        |         |         | V       |
18+30      13.6465      7.98  |Q        |         |         | V       |
18+35      13.7008      7.89  |Q        |         |         |  V      |
18+40      13.7546      7.80  |Q        |         |         |  V      |
18+45      13.8077      7.72  |Q        |         |         |  V      |
18+50      13.8604      7.64  |Q        |         |         |  V      |
18+55      13.9124      7.56  |Q        |         |         |  V      |
19+ 0      13.9640      7.49  |Q        |         |         |  V      |
19+ 5      14.0150      7.41  |Q        |         |         |  V      |
19+10      14.0656      7.34  |Q        |         |         |  V      |
19+15      14.1157      7.28  |Q        |         |         |   V     |
19+20      14.1654      7.21  |Q        |         |         |   V     |
19+25      14.2146      7.15  |Q        |         |         |   V     |
19+30      14.2634      7.09  |Q        |         |         |   V     |
19+35      14.3118      7.03  |Q        |         |         |   V     |
19+40      14.3598      6.97  |Q        |         |         |   V     |
19+45      14.4075      6.92  |Q        |         |         |   V     |
19+50      14.4548      6.86  |Q        |         |         |   V     |
19+55      14.5017      6.81  |Q        |         |         |   V     |
20+ 0      14.5483      6.76  |Q        |         |         |    V    |
20+ 5      14.5945      6.71  |Q        |         |         |    V    |
20+10      14.6404      6.67  |Q        |         |         |    V    |
20+15      14.6860      6.62  |Q        |         |         |    V    |
20+20      14.7313      6.58  |Q        |         |         |    V    |
20+25      14.7763      6.53  |Q        |         |         |    V    |
20+30      14.8210      6.49  |Q        |         |         |    V    |
20+35      14.8654      6.45  |Q        |         |         |    V    |
20+40      14.9096      6.41  |Q        |         |         |    V    |
20+45      14.9535      6.37  |Q        |         |         |     V   |
20+50      14.9971      6.33  |Q        |         |         |     V   |
20+55      15.0404      6.30  |Q        |         |         |     V   |
21+ 0      15.0836      6.26  |Q        |         |         |     V   |
21+ 5      15.1264      6.22  |Q        |         |         |     V   |
21+10      15.1690      6.19  |Q        |         |         |     V   |
21+15      15.2114      6.16  |Q        |         |         |     V   |
21+20      15.2536      6.12  |Q        |         |         |     V   |
21+25      15.2955      6.09  |Q        |         |         |     V   |
21+30      15.3372      6.06  |Q        |         |         |      V  |
21+35      15.3788      6.03  |Q        |         |         |      V  |
21+40      15.4200      6.00  |Q        |         |         |      V  |
21+45      15.4611      5.97  |Q        |         |         |      V  |
21+50      15.5020      5.94  |Q        |         |         |      V  |
21+55      15.5427      5.91  |Q        |         |         |      V  |
22+ 0      15.5832      5.88  |Q        |         |         |      V  |
22+ 5      15.6235      5.85  |Q        |         |         |      V  |
22+10      15.6636      5.82  |Q        |         |         |      V  |
22+15      15.7035      5.80  |Q        |         |         |      V  |
22+20      15.7433      5.77  |Q        |         |         |      V  |
22+25      15.7829      5.75  |Q        |         |         |       V |
22+30      15.8223      5.72  |Q        |         |         |       V |
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   22+35      15.8615      5.70  |Q        |         |         |       V |
   22+40      15.9006      5.67  |Q        |         |         |       V |
   22+45      15.9395      5.65  |Q        |         |         |       V |
   22+50      15.9782      5.62  |Q        |         |         |       V |
   22+55      16.0168      5.60  |Q        |         |         |       V |
   23+ 0      16.0552      5.58  |Q        |         |         |       V |
   23+ 5      16.0935      5.56  |Q        |         |         |       V |
   23+10      16.1316      5.53  |Q        |         |         |       V |
   23+15      16.1695      5.51  |Q        |         |         |        V|
   23+20      16.2074      5.49  |Q        |         |         |        V|
   23+25      16.2450      5.47  |Q        |         |         |        V|
   23+30      16.2826      5.45  |Q        |         |         |        V|
   23+35      16.3199      5.43  |Q        |         |         |        V|
   23+40      16.3572      5.41  |Q        |         |         |        V|
   23+45      16.3943      5.39  |Q        |         |         |        V|
   23+50      16.4313      5.37  |Q        |         |         |        V|
   23+55      16.4681      5.35  |Q        |         |         |        V|
   24+ 0      16.5049      5.33  |Q        |         |         |        V|
   24+ 5      16.5389      4.94  Q         |         |         |        V|
   24+10      16.5580      2.78  Q         |         |         |        V|
   24+15      16.5664      1.22  Q         |         |         |        V|
   24+20      16.5708      0.64  Q         |         |         |        V|
   24+25      16.5730      0.31  Q         |         |         |        V|
   24+30      16.5740      0.14  Q         |         |         |        V|
   24+35      16.5745      0.08  Q         |         |         |        V|
   24+40      16.5749      0.05  Q         |         |         |        V|
   24+45      16.5750      0.02  Q         |         |         |        V|
   24+50      16.5750      0.00  Q         |         |         |         V
------------------------------------------------------------------------
```

Area 'A' – 100 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

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                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'A'
100 YEAR 24 HOUR STORM
DECEMBER 16, 2024
------------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            43.08            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            43.08            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            43.08           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            43.08            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            43.08            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            43.08           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 36.7      56.7         43.08      1.000     0.725    0.610    0.442

Area-averaged adjusted loss rate Fm (In/Hr) =  0.442

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
26.28	0.610	36.7	56.7	7.64	0.505
16.80	0.390	98.0	98.0	0.20	0.980

Area-averaged catchment yield fraction, Y = 0.690
Area-averaged low loss fraction, Yb = 0.310
User entry of time of concentration = 0.195 (hours)
++
Watershed area = 43.08(Ac.)
Catchment Lag time = 0.156 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 53.3367
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.442(In/Hr)
Average low loss rate fraction (Yb) = 0.310 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 43.08(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.710(In)
30-minute factor = 0.998 Adjusted rainfall = 1.216(In)
1-hour factor = 0.998 Adjusted rainfall = 1.497(In)
3-hour factor = 1.000 Adjusted rainfall = 2.941(In)
6-hour factor = 1.000 Adjusted rainfall = 4.499(In)
24-hour factor = 1.000 Adjusted rainfall = 11.999(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 521.00 (CFS))	
1	4.695	24.462
2	28.880	126.002
3	66.048	193.644
4	79.773	71.506
5	87.709	41.347
6	92.798	26.514
7	95.996	16.665
8	97.794	9.363
9	98.523	3.803
10	99.025	2.614
11	99.385	1.877
12	99.747	1.883
13	99.932	0.962
14	100.000	0.357

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7103	0.7103
2	0.8745	0.1642
3	0.9876	0.1131
4	1.0767	0.0890
5	1.1512	0.0745
6	1.2159	0.0647
7	1.2735	0.0576
8	1.3255	0.0521
9	1.3732	0.0477
10	1.4173	0.0441
11	1.4584	0.0411

12	1.4970	0.0386
13	1.5725	0.0755
14	1.6458	0.0733
15	1.7171	0.0713
16	1.7866	0.0695
17	1.8544	0.0678
18	1.9207	0.0663
19	1.9856	0.0649
20	2.0493	0.0636
21	2.1117	0.0624
22	2.1729	0.0613
23	2.2331	0.0602
24	2.2923	0.0592
25	2.3506	0.0583
26	2.4079	0.0574
27	2.4644	0.0565
28	2.5202	0.0557
29	2.5751	0.0550
30	2.6294	0.0542
31	2.6829	0.0535
32	2.7358	0.0529
33	2.7880	0.0522
34	2.8397	0.0516
35	2.8907	0.0511
36	2.9412	0.0505
37	2.9911	0.0498
38	3.0404	0.0493
39	3.0892	0.0488
40	3.1375	0.0483
41	3.1854	0.0479
42	3.2329	0.0474
43	3.2798	0.0470
44	3.3264	0.0466
45	3.3726	0.0462
46	3.4184	0.0458
47	3.4637	0.0454
48	3.5088	0.0450
49	3.5534	0.0447
50	3.5977	0.0443
51	3.6417	0.0440
52	3.6853	0.0436
53	3.7286	0.0433
54	3.7716	0.0430
55	3.8143	0.0427
56	3.8567	0.0424
57	3.8988	0.0421
58	3.9406	0.0418
59	3.9821	0.0415
60	4.0234	0.0413
61	4.0644	0.0410
62	4.1051	0.0407
63	4.1456	0.0405
64	4.1858	0.0402
65	4.2258	0.0400
66	4.2656	0.0398
67	4.3051	0.0395
68	4.3444	0.0393
69	4.3835	0.0391
70	4.4223	0.0389
71	4.4610	0.0386
72	4.4994	0.0384
73	4.5435	0.0441
74	4.5875	0.0440
75	4.6313	0.0438
76	4.6749	0.0436
77	4.7183	0.0434
78	4.7616	0.0433
79	4.8047	0.0431
80	4.8476	0.0430
81	4.8904	0.0428
82	4.9331	0.0426

83	4.9756	0.0425
84	5.0179	0.0423
85	5.0601	0.0422
86	5.1022	0.0421
87	5.1441	0.0419
88	5.1858	0.0418
89	5.2275	0.0416
90	5.2690	0.0415
91	5.3103	0.0414
92	5.3515	0.0412
93	5.3926	0.0411
94	5.4336	0.0410
95	5.4744	0.0408
96	5.5152	0.0407
97	5.5557	0.0406
98	5.5962	0.0405
99	5.6366	0.0403
100	5.6768	0.0402
101	5.7169	0.0401
102	5.7569	0.0400
103	5.7968	0.0399
104	5.8365	0.0398
105	5.8762	0.0397
106	5.9157	0.0395
107	5.9552	0.0394
108	5.9945	0.0393
109	6.0337	0.0392
110	6.0728	0.0391
111	6.1118	0.0390
112	6.1507	0.0389
113	6.1896	0.0388
114	6.2283	0.0387
115	6.2669	0.0386
116	6.3054	0.0385
117	6.3438	0.0384
118	6.3821	0.0383
119	6.4203	0.0382
120	6.4585	0.0381
121	6.4965	0.0380
122	6.5344	0.0379
123	6.5723	0.0379
124	6.6101	0.0378
125	6.6477	0.0377
126	6.6853	0.0376
127	6.7228	0.0375
128	6.7602	0.0374
129	6.7976	0.0373
130	6.8348	0.0372
131	6.8720	0.0372
132	6.9090	0.0371
133	6.9460	0.0370
134	6.9829	0.0369
135	7.0198	0.0368
136	7.0565	0.0368
137	7.0932	0.0367
138	7.1298	0.0366
139	7.1663	0.0365
140	7.2028	0.0364
141	7.2391	0.0364
142	7.2754	0.0363
143	7.3116	0.0362
144	7.3478	0.0361
145	7.3838	0.0361
146	7.4198	0.0360
147	7.4558	0.0359
148	7.4916	0.0359
149	7.5274	0.0358
150	7.5631	0.0357
151	7.5988	0.0356
152	7.6343	0.0356
153	7.6698	0.0355

154	7.7053	0.0354
155	7.7406	0.0354
156	7.7759	0.0353
157	7.8112	0.0352
158	7.8463	0.0352
159	7.8815	0.0351
160	7.9165	0.0350
161	7.9515	0.0350
162	7.9864	0.0349
163	8.0212	0.0349
164	8.0560	0.0348
165	8.0908	0.0347
166	8.1254	0.0347
167	8.1600	0.0346
168	8.1946	0.0345
169	8.2290	0.0345
170	8.2635	0.0344
171	8.2978	0.0344
172	8.3321	0.0343
173	8.3664	0.0342
174	8.4006	0.0342
175	8.4347	0.0341
176	8.4688	0.0341
177	8.5028	0.0340
178	8.5368	0.0340
179	8.5707	0.0339
180	8.6045	0.0339
181	8.6383	0.0338
182	8.6721	0.0337
183	8.7058	0.0337
184	8.7394	0.0336
185	8.7730	0.0336
186	8.8065	0.0335
187	8.8400	0.0335
188	8.8734	0.0334
189	8.9068	0.0334
190	8.9401	0.0333
191	8.9734	0.0333
192	9.0066	0.0332
193	9.0397	0.0332
194	9.0729	0.0331
195	9.1059	0.0331
196	9.1389	0.0330
197	9.1719	0.0330
198	9.2048	0.0329
199	9.2377	0.0329
200	9.2705	0.0328
201	9.3033	0.0328
202	9.3360	0.0327
203	9.3687	0.0327
204	9.4013	0.0326
205	9.4339	0.0326
206	9.4665	0.0325
207	9.4990	0.0325
208	9.5314	0.0324
209	9.5638	0.0324
210	9.5962	0.0324
211	9.6285	0.0323
212	9.6607	0.0323
213	9.6930	0.0322
214	9.7251	0.0322
215	9.7573	0.0321
216	9.7894	0.0321
217	9.8214	0.0320
218	9.8534	0.0320
219	9.8854	0.0320
220	9.9173	0.0319
221	9.9492	0.0319
222	9.9810	0.0318
223	10.0128	0.0318
224	10.0445	0.0317

225	10.0762	0.0317
226	10.1079	0.0317
227	10.1395	0.0316
228	10.1711	0.0316
229	10.2027	0.0315
230	10.2342	0.0315
231	10.2656	0.0315
232	10.2971	0.0314
233	10.3284	0.0314
234	10.3598	0.0313
235	10.3911	0.0313
236	10.4224	0.0313
237	10.4536	0.0312
238	10.4848	0.0312
239	10.5159	0.0312
240	10.5471	0.0311
241	10.5781	0.0311
242	10.6092	0.0310
243	10.6402	0.0310
244	10.6711	0.0310
245	10.7021	0.0309
246	10.7329	0.0309
247	10.7638	0.0309
248	10.7946	0.0308
249	10.8254	0.0308
250	10.8561	0.0307
251	10.8868	0.0307
252	10.9175	0.0307
253	10.9482	0.0306
254	10.9788	0.0306
255	11.0093	0.0306
256	11.0399	0.0305
257	11.0704	0.0305
258	11.1008	0.0305
259	11.1312	0.0304
260	11.1616	0.0304
261	11.1920	0.0304
262	11.2223	0.0303
263	11.2526	0.0303
264	11.2829	0.0303
265	11.3131	0.0302
266	11.3433	0.0302
267	11.3734	0.0302
268	11.4036	0.0301
269	11.4337	0.0301
270	11.4637	0.0301
271	11.4937	0.0300
272	11.5237	0.0300
273	11.5537	0.0300
274	11.5836	0.0299
275	11.6135	0.0299
276	11.6434	0.0299
277	11.6732	0.0298
278	11.7030	0.0298
279	11.7328	0.0298
280	11.7625	0.0297
281	11.7922	0.0297
282	11.8219	0.0297
283	11.8516	0.0296
284	11.8812	0.0296
285	11.9108	0.0296
286	11.9403	0.0296
287	11.9699	0.0295
288	11.9994	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0091	0.0204
2	0.0295	0.0092	0.0204

3	0.0296	0.0092	0.0204
4	0.0296	0.0092	0.0204
5	0.0297	0.0092	0.0205
6	0.0297	0.0092	0.0205
7	0.0298	0.0092	0.0205
8	0.0298	0.0092	0.0206
9	0.0299	0.0093	0.0206
10	0.0299	0.0093	0.0206
11	0.0300	0.0093	0.0207
12	0.0300	0.0093	0.0207
13	0.0301	0.0093	0.0207
14	0.0301	0.0093	0.0208
15	0.0302	0.0093	0.0208
16	0.0302	0.0094	0.0208
17	0.0303	0.0094	0.0209
18	0.0303	0.0094	0.0209
19	0.0304	0.0094	0.0209
20	0.0304	0.0094	0.0210
21	0.0305	0.0094	0.0210
22	0.0305	0.0095	0.0210
23	0.0306	0.0095	0.0211
24	0.0306	0.0095	0.0211
25	0.0307	0.0095	0.0212
26	0.0307	0.0095	0.0212
27	0.0308	0.0095	0.0212
28	0.0308	0.0096	0.0213
29	0.0309	0.0096	0.0213
30	0.0309	0.0096	0.0213
31	0.0310	0.0096	0.0214
32	0.0310	0.0096	0.0214
33	0.0311	0.0096	0.0215
34	0.0312	0.0097	0.0215
35	0.0312	0.0097	0.0215
36	0.0313	0.0097	0.0216
37	0.0313	0.0097	0.0216
38	0.0314	0.0097	0.0217
39	0.0315	0.0098	0.0217
40	0.0315	0.0098	0.0217
41	0.0316	0.0098	0.0218
42	0.0316	0.0098	0.0218
43	0.0317	0.0098	0.0219
44	0.0317	0.0098	0.0219
45	0.0318	0.0099	0.0220
46	0.0319	0.0099	0.0220
47	0.0320	0.0099	0.0221
48	0.0320	0.0099	0.0221
49	0.0321	0.0099	0.0221
50	0.0321	0.0100	0.0222
51	0.0322	0.0100	0.0222
52	0.0323	0.0100	0.0223
53	0.0324	0.0100	0.0223
54	0.0324	0.0100	0.0224
55	0.0325	0.0101	0.0224
56	0.0325	0.0101	0.0225
57	0.0326	0.0101	0.0225
58	0.0327	0.0101	0.0225
59	0.0328	0.0102	0.0226
60	0.0328	0.0102	0.0226
61	0.0329	0.0102	0.0227
62	0.0330	0.0102	0.0227
63	0.0331	0.0103	0.0228
64	0.0331	0.0103	0.0229
65	0.0332	0.0103	0.0229
66	0.0333	0.0103	0.0230
67	0.0334	0.0103	0.0230
68	0.0334	0.0104	0.0231
69	0.0335	0.0104	0.0231
70	0.0336	0.0104	0.0232
71	0.0337	0.0104	0.0232
72	0.0337	0.0105	0.0233
73	0.0339	0.0105	0.0234

74	0.0339	0.0105	0.0234
75	0.0340	0.0105	0.0235
76	0.0341	0.0106	0.0235
77	0.0342	0.0106	0.0236
78	0.0342	0.0106	0.0236
79	0.0344	0.0107	0.0237
80	0.0344	0.0107	0.0238
81	0.0345	0.0107	0.0238
82	0.0346	0.0107	0.0239
83	0.0347	0.0108	0.0240
84	0.0348	0.0108	0.0240
85	0.0349	0.0108	0.0241
86	0.0350	0.0108	0.0241
87	0.0351	0.0109	0.0242
88	0.0352	0.0109	0.0243
89	0.0353	0.0109	0.0244
90	0.0354	0.0110	0.0244
91	0.0355	0.0110	0.0245
92	0.0356	0.0110	0.0245
93	0.0357	0.0111	0.0246
94	0.0358	0.0111	0.0247
95	0.0359	0.0111	0.0248
96	0.0360	0.0112	0.0248
97	0.0361	0.0112	0.0249
98	0.0362	0.0112	0.0250
99	0.0364	0.0113	0.0251
100	0.0364	0.0113	0.0251
101	0.0366	0.0113	0.0253
102	0.0367	0.0114	0.0253
103	0.0368	0.0114	0.0254
104	0.0369	0.0114	0.0255
105	0.0371	0.0115	0.0256
106	0.0372	0.0115	0.0256
107	0.0373	0.0116	0.0258
108	0.0374	0.0116	0.0258
109	0.0376	0.0117	0.0259
110	0.0377	0.0117	0.0260
111	0.0379	0.0117	0.0261
112	0.0379	0.0118	0.0262
113	0.0381	0.0118	0.0263
114	0.0382	0.0118	0.0264
115	0.0384	0.0119	0.0265
116	0.0385	0.0119	0.0266
117	0.0387	0.0120	0.0267
118	0.0388	0.0120	0.0268
119	0.0390	0.0121	0.0269
120	0.0391	0.0121	0.0270
121	0.0393	0.0122	0.0271
122	0.0394	0.0122	0.0272
123	0.0397	0.0123	0.0274
124	0.0398	0.0123	0.0274
125	0.0400	0.0124	0.0276
126	0.0401	0.0124	0.0277
127	0.0403	0.0125	0.0278
128	0.0405	0.0125	0.0279
129	0.0407	0.0126	0.0281
130	0.0408	0.0127	0.0282
131	0.0411	0.0127	0.0284
132	0.0412	0.0128	0.0284
133	0.0415	0.0129	0.0286
134	0.0416	0.0129	0.0287
135	0.0419	0.0130	0.0289
136	0.0421	0.0130	0.0290
137	0.0423	0.0131	0.0292
138	0.0425	0.0132	0.0293
139	0.0428	0.0133	0.0295
140	0.0430	0.0133	0.0296
141	0.0433	0.0134	0.0299
142	0.0434	0.0135	0.0300
143	0.0438	0.0136	0.0302
144	0.0440	0.0136	0.0303

145	0.0384	0.0119	0.0265
146	0.0386	0.0120	0.0267
147	0.0391	0.0121	0.0270
148	0.0393	0.0122	0.0271
149	0.0398	0.0123	0.0274
150	0.0400	0.0124	0.0276
151	0.0405	0.0125	0.0279
152	0.0407	0.0126	0.0281
153	0.0413	0.0128	0.0285
154	0.0415	0.0129	0.0287
155	0.0421	0.0130	0.0290
156	0.0424	0.0131	0.0292
157	0.0430	0.0133	0.0297
158	0.0433	0.0134	0.0299
159	0.0440	0.0136	0.0303
160	0.0443	0.0137	0.0306
161	0.0450	0.0140	0.0311
162	0.0454	0.0141	0.0313
163	0.0462	0.0143	0.0319
164	0.0466	0.0144	0.0321
165	0.0474	0.0147	0.0327
166	0.0479	0.0148	0.0330
167	0.0488	0.0151	0.0337
168	0.0493	0.0153	0.0340
169	0.0505	0.0157	0.0348
170	0.0511	0.0158	0.0352
171	0.0522	0.0162	0.0361
172	0.0529	0.0164	0.0365
173	0.0542	0.0168	0.0374
174	0.0550	0.0170	0.0379
175	0.0565	0.0175	0.0390
176	0.0574	0.0178	0.0396
177	0.0592	0.0184	0.0408
178	0.0602	0.0187	0.0415
179	0.0624	0.0193	0.0431
180	0.0636	0.0197	0.0439
181	0.0663	0.0206	0.0458
182	0.0678	0.0210	0.0468
183	0.0713	0.0221	0.0492
184	0.0733	0.0227	0.0506
185	0.0386	0.0120	0.0266
186	0.0411	0.0127	0.0284
187	0.0477	0.0148	0.0329
188	0.0521	0.0161	0.0359
189	0.0647	0.0201	0.0447
190	0.0745	0.0231	0.0514
191	0.1131	0.0351	0.0781
192	0.1642	0.0368	0.1274
193	0.7103	0.0368	0.6735
194	0.0890	0.0276	0.0614
195	0.0576	0.0178	0.0397
196	0.0441	0.0137	0.0304
197	0.0755	0.0234	0.0521
198	0.0695	0.0215	0.0480
199	0.0649	0.0201	0.0448
200	0.0613	0.0190	0.0423
201	0.0583	0.0181	0.0402
202	0.0557	0.0173	0.0384
203	0.0535	0.0166	0.0369
204	0.0516	0.0160	0.0356
205	0.0498	0.0155	0.0344
206	0.0483	0.0150	0.0334
207	0.0470	0.0146	0.0324
208	0.0458	0.0142	0.0316
209	0.0447	0.0138	0.0308
210	0.0436	0.0135	0.0301
211	0.0427	0.0132	0.0295
212	0.0418	0.0130	0.0288
213	0.0410	0.0127	0.0283
214	0.0402	0.0125	0.0278
215	0.0395	0.0123	0.0273

216	0.0389	0.0120	0.0268
217	0.0441	0.0137	0.0304
218	0.0436	0.0135	0.0301
219	0.0431	0.0134	0.0297
220	0.0426	0.0132	0.0294
221	0.0422	0.0131	0.0291
222	0.0418	0.0129	0.0288
223	0.0414	0.0128	0.0285
224	0.0410	0.0127	0.0283
225	0.0406	0.0126	0.0280
226	0.0402	0.0125	0.0278
227	0.0399	0.0124	0.0275
228	0.0395	0.0123	0.0273
229	0.0392	0.0122	0.0271
230	0.0389	0.0121	0.0268
231	0.0386	0.0120	0.0266
232	0.0383	0.0119	0.0264
233	0.0380	0.0118	0.0262
234	0.0378	0.0117	0.0261
235	0.0375	0.0116	0.0259
236	0.0372	0.0115	0.0257
237	0.0370	0.0115	0.0255
238	0.0368	0.0114	0.0254
239	0.0365	0.0113	0.0252
240	0.0363	0.0112	0.0250
241	0.0361	0.0112	0.0249
242	0.0359	0.0111	0.0247
243	0.0356	0.0110	0.0246
244	0.0354	0.0110	0.0245
245	0.0352	0.0109	0.0243
246	0.0350	0.0109	0.0242
247	0.0349	0.0108	0.0240
248	0.0347	0.0107	0.0239
249	0.0345	0.0107	0.0238
250	0.0343	0.0106	0.0237
251	0.0341	0.0106	0.0236
252	0.0340	0.0105	0.0234
253	0.0338	0.0105	0.0233
254	0.0336	0.0104	0.0232
255	0.0335	0.0104	0.0231
256	0.0333	0.0103	0.0230
257	0.0332	0.0103	0.0229
258	0.0330	0.0102	0.0228
259	0.0329	0.0102	0.0227
260	0.0327	0.0101	0.0226
261	0.0326	0.0101	0.0225
262	0.0324	0.0101	0.0224
263	0.0323	0.0100	0.0223
264	0.0322	0.0100	0.0222
265	0.0320	0.0099	0.0221
266	0.0319	0.0099	0.0220
267	0.0318	0.0099	0.0219
268	0.0317	0.0098	0.0219
269	0.0315	0.0098	0.0218
270	0.0314	0.0097	0.0217
271	0.0313	0.0097	0.0216
272	0.0312	0.0097	0.0215
273	0.0311	0.0096	0.0214
274	0.0310	0.0096	0.0214
275	0.0309	0.0096	0.0213
276	0.0307	0.0095	0.0212
277	0.0306	0.0095	0.0211
278	0.0305	0.0095	0.0211
279	0.0304	0.0094	0.0210
280	0.0303	0.0094	0.0209
281	0.0302	0.0094	0.0209
282	0.0301	0.0093	0.0208
283	0.0300	0.0093	0.0207
284	0.0299	0.0093	0.0207
285	0.0298	0.0092	0.0206
286	0.0297	0.0092	0.0205

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      287              0.0296           0.0092              0.0205
      288              0.0296           0.0092              0.0204
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      3.52(In)
      Total effective rainfall =      8.48(In)
      Peak flow rate in flood hydrograph =    154.32(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       50.0     100.0     150.0     200.0
---------------------------------------------------------------------------
  0+ 5       0.0034      0.50  Q         |          |          |          |
  0+10       0.0245      3.06  Q         |          |          |          |
  0+15       0.0728      7.01  VQ        |          |          |          |
  0+20       0.1311      8.47  VQ        |          |          |          |
  0+25       0.1954      9.33  VQ        |          |          |          |
  0+30       0.2634      9.88  VQ        |          |          |          |
  0+35       0.3339     10.24  V Q       |          |          |          |
  0+40       0.4058     10.44  V Q       |          |          |          |
  0+45       0.4784     10.54  V Q       |          |          |          |
  0+50       0.5514     10.61  V Q       |          |          |          |
  0+55       0.6249     10.66  V Q       |          |          |          |
  1+ 0       0.6987     10.72  V Q       |          |          |          |
  1+ 5       0.7727     10.75  |VQ       |          |          |          |
  1+10       0.8469     10.78  |VQ       |          |          |          |
  1+15       0.9213     10.79  |VQ       |          |          |          |
  1+20       0.9957     10.81  |VQ       |          |          |          |
  1+25       1.0703     10.83  |VQ       |          |          |          |
  1+30       1.1450     10.85  |VQ       |          |          |          |
  1+35       1.2199     10.87  |VQ       |          |          |          |
  1+40       1.2948     10.88  |VQ       |          |          |          |
  1+45       1.3699     10.90  |VQ       |          |          |          |
  1+50       1.4451     10.92  |VQ       |          |          |          |
  1+55       1.5205     10.94  |VQ       |          |          |          |
  2+ 0       1.5959     10.96  | Q       |          |          |          |
  2+ 5       1.6715     10.98  | Q       |          |          |          |
  2+10       1.7472     10.99  | Q       |          |          |          |
  2+15       1.8231     11.01  | Q       |          |          |          |
  2+20       1.8991     11.03  | Q       |          |          |          |
  2+25       1.9752     11.05  | Q       |          |          |          |
  2+30       2.0515     11.07  | Q       |          |          |          |
  2+35       2.1278     11.09  | Q       |          |          |          |
  2+40       2.2044     11.11  | Q       |          |          |          |
  2+45       2.2810     11.13  | Q       |          |          |          |
  2+50       2.3578     11.15  | QV      |          |          |          |
  2+55       2.4348     11.17  | QV      |          |          |          |
  3+ 0       2.5119     11.19  | QV      |          |          |          |
  3+ 5       2.5891     11.21  | QV      |          |          |          |
  3+10       2.6665     11.23  | QV      |          |          |          |
  3+15       2.7440     11.26  | QV      |          |          |          |
  3+20       2.8216     11.28  | QV      |          |          |          |
  3+25       2.8995     11.30  | QV      |          |          |          |
  3+30       2.9774     11.32  | QV      |          |          |          |
  3+35       3.0555     11.34  | Q V     |          |          |          |
  3+40       3.1338     11.36  | Q V     |          |          |          |
  3+45       3.2122     11.38  | Q V     |          |          |          |
  3+50       3.2907     11.41  | Q V     |          |          |          |
  3+55       3.3694     11.43  | Q V     |          |          |          |
  4+ 0       3.4483     11.45  | Q V     |          |          |          |
  4+ 5       3.5273     11.48  | Q V     |          |          |          |
  4+10       3.6065     11.50  | Q V     |          |          |          |
  4+15       3.6859     11.52  | Q V     |          |          |          |
  4+20       3.7654     11.54  | Q V     |          |          |          |
  4+25       3.8451     11.57  | Q  V    |          |          |          |
  4+30       3.9249     11.59  | Q  V    |          |          |          |
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 4+35      4.0049     11.62  | Q  V    |         |         |         |
 4+40      4.0851     11.64  | Q  V    |         |         |         |
 4+45      4.1654     11.67  | Q  V    |         |         |         |
 4+50      4.2459     11.69  | Q  V    |         |         |         |
 4+55      4.3266     11.72  | Q  V    |         |         |         |
 5+ 0      4.4074     11.74  | Q  V    |         |         |         |
 5+ 5      4.4885     11.77  | Q  V    |         |         |         |
 5+10      4.5697     11.79  | Q   V   |         |         |         |
 5+15      4.6511     11.82  | Q   V   |         |         |         |
 5+20      4.7326     11.84  | Q   V   |         |         |         |
 5+25      4.8144     11.87  | Q   V   |         |         |         |
 5+30      4.8963     11.90  | Q   V   |         |         |         |
 5+35      4.9784     11.92  | Q   V   |         |         |         |
 5+40      5.0607     11.95  | Q   V   |         |         |         |
 5+45      5.1432     11.98  | Q   V   |         |         |         |
 5+50      5.2259     12.01  | Q   V   |         |         |         |
 5+55      5.3088     12.04  | Q   V   |         |         |         |
 6+ 0      5.3919     12.06  | Q    V  |         |         |         |
 6+ 5      5.4752     12.09  | Q    V  |         |         |         |
 6+10      5.5587     12.12  | Q    V  |         |         |         |
 6+15      5.6423     12.15  | Q    V  |         |         |         |
 6+20      5.7262     12.18  | Q    V  |         |         |         |
 6+25      5.8103     12.21  | Q    V  |         |         |         |
 6+30      5.8946     12.24  | Q    V  |         |         |         |
 6+35      5.9791     12.27  | Q    V  |         |         |         |
 6+40      6.0639     12.30  | Q    V  |         |         |         |
 6+45      6.1488     12.33  | Q     V |         |         |         |
 6+50      6.2340     12.36  | Q     V |         |         |         |
 6+55      6.3193     12.40  | Q     V |         |         |         |
 7+ 0      6.4049     12.43  | Q     V |         |         |         |
 7+ 5      6.4908     12.46  | Q     V |         |         |         |
 7+10      6.5768     12.50  | Q     V |         |         |         |
 7+15      6.6631     12.53  | Q     V |         |         |         |
 7+20      6.7497     12.56  | Q     V |         |         |         |
 7+25      6.8364     12.60  | Q     V |         |         |         |
 7+30      6.9234     12.63  | Q      V|         |         |         |
 7+35      7.0107     12.67  | Q      V|         |         |         |
 7+40      7.0982     12.70  | Q      V|         |         |         |
 7+45      7.1859     12.74  | Q      V|         |         |         |
 7+50      7.2739     12.78  | Q      V|         |         |         |
 7+55      7.3622     12.81  | Q      V|         |         |         |
 8+ 0      7.4507     12.85  | Q      V|         |         |         |
 8+ 5      7.5394     12.89  | Q      V|         |         |         |
 8+10      7.6285     12.93  | Q       V         |         |         |
 8+15      7.7178     12.97  | Q       V         |         |         |
 8+20      7.8074     13.01  | Q       V         |         |         |
 8+25      7.8972     13.05  | Q       V         |         |         |
 8+30      7.9874     13.09  | Q       V         |         |         |
 8+35      8.0778     13.13  | Q       V         |         |         |
 8+40      8.1685     13.17  | Q       V         |         |         |
 8+45      8.2595     13.21  | Q       V         |         |         |
 8+50      8.3508     13.26  | Q       V         |         |         |
 8+55      8.4424     13.30  | Q       |V        |         |         |
 9+ 0      8.5343     13.34  | Q       |V        |         |         |
 9+ 5      8.6265     13.39  | Q       |V        |         |         |
 9+10      8.7191     13.44  | Q       |V        |         |         |
 9+15      8.8119     13.48  | Q       |V        |         |         |
 9+20      8.9051     13.53  | Q       |V        |         |         |
 9+25      8.9986     13.58  | Q       |V        |         |         |
 9+30      9.0924     13.63  | Q       |V        |         |         |
 9+35      9.1866     13.68  | Q       | V       |         |         |
 9+40      9.2812     13.72  | Q       | V       |         |         |
 9+45      9.3760     13.78  | Q       | V       |         |         |
 9+50      9.4713     13.83  | Q       | V       |         |         |
 9+55      9.5669     13.88  | Q       | V       |         |         |
10+ 0      9.6628     13.93  | Q       | V       |         |         |
10+ 5      9.7592     13.99  | Q       | V       |         |         |
10+10      9.8559     14.04  | Q       | V       |         |         |
10+15      9.9530     14.10  | Q       |  V      |         |         |
10+20     10.0506     14.16  | Q       |  V      |         |         |
10+25     10.1485     14.22  | Q       |  V      |         |         |
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10+30      10.2468     14.28  | Q       |  V      |         |         |
10+35      10.3456     14.34  | Q       |  V      |         |         |
10+40      10.4447     14.40  | Q       |  V      |         |         |
10+45      10.5443     14.46  | Q       |  V      |         |         |
10+50      10.6444     14.53  | Q       |  V      |         |         |
10+55      10.7449     14.59  | Q       |   V     |         |         |
11+ 0      10.8459     14.66  | Q       |   V     |         |         |
11+ 5      10.9473     14.73  | Q       |   V     |         |         |
11+10      11.0492     14.80  | Q       |   V     |         |         |
11+15      11.1517     14.87  | Q       |   V     |         |         |
11+20      11.2546     14.94  | Q       |   V     |         |         |
11+25      11.3580     15.02  |  Q      |   V     |         |         |
11+30      11.4620     15.09  |  Q      |    V    |         |         |
11+35      11.5665     15.17  |  Q      |    V    |         |         |
11+40      11.6715     15.25  |  Q      |    V    |         |         |
11+45      11.7771     15.33  |  Q      |    V    |         |         |
11+50      11.8833     15.42  |  Q      |    V    |         |         |
11+55      11.9901     15.50  |  Q      |    V    |         |         |
12+ 0      12.0974     15.59  |  Q      |    V    |         |         |
12+ 5      12.2048     15.58  |  Q      |     V   |         |         |
12+10      12.3092     15.16  |  Q      |     V   |         |         |
12+15      12.4089     14.48  | Q       |     V   |         |         |
12+20      12.5073     14.29  | Q       |     V   |         |         |
12+25      12.6054     14.24  | Q       |     V   |         |         |
12+30      12.7035     14.25  | Q       |     V   |         |         |
12+35      12.8020     14.30  | Q       |     V   |         |         |
12+40      12.9011     14.39  | Q       |     V   |         |         |
12+45      13.0010     14.51  | Q       |      V  |         |         |
12+50      13.1017     14.63  | Q       |      V  |         |         |
12+55      13.2034     14.76  | Q       |      V  |         |         |
13+ 0      13.3060     14.89  | Q       |      V  |         |         |
13+ 5      13.4096     15.04  |  Q      |      V  |         |         |
13+10      13.5142     15.19  |  Q      |      V  |         |         |
13+15      13.6200     15.36  |  Q      |      V  |         |         |
13+20      13.7268     15.52  |  Q      |       V |         |         |
13+25      13.8350     15.70  |  Q      |       V |         |         |
13+30      13.9443     15.88  |  Q      |       V |         |         |
13+35      14.0550     16.07  |  Q      |       V |         |         |
13+40      14.1670     16.26  |  Q      |       V |         |         |
13+45      14.2804     16.47  |  Q      |       V |         |         |
13+50      14.3953     16.68  |  Q      |       V |         |         |
13+55      14.5118     16.92  |  Q      |        V|         |         |
14+ 0      14.6299     17.15  |  Q      |        V|         |         |
14+ 5      14.7498     17.41  |  Q      |        V|         |         |
14+10      14.8715     17.67  |  Q      |        V|         |         |
14+15      14.9953     17.98  |  Q      |        V|         |         |
14+20      15.1211     18.27  |  Q      |        V|         |         |
14+25      15.2492     18.59  |  Q      |         V         |         |
14+30      15.3795     18.92  |  Q      |         V         |         |
14+35      15.5124     19.29  |  Q      |         V         |         |
14+40      15.6478     19.66  |  Q      |         V         |         |
14+45      15.7861     20.09  |   Q     |         V         |         |
14+50      15.9274     20.52  |   Q     |         V         |         |
14+55      16.0721     21.01  |   Q     |         |V        |         |
15+ 0      16.2204     21.53  |   Q     |         |V        |         |
15+ 5      16.3727     22.12  |   Q     |         |V        |         |
15+10      16.5293     22.74  |   Q     |         |V        |         |
15+15      16.6909     23.47  |   Q     |         |V        |         |
15+20      16.8579     24.25  |   Q     |         | V       |         |
15+25      17.0267     24.51  |   Q     |         | V       |         |
15+30      17.1790     22.10  |   Q     |         | V       |         |
15+35      17.3035     18.07  |  Q      |         | V       |         |
15+40      17.4240     17.51  |  Q      |         | V       |         |
15+45      17.5495     18.22  |  Q      |         |  V      |         |
15+50      17.6865     19.89  |  Q      |         |  V      |         |
15+55      17.8461     23.17  |   Q     |         |  V      |         |
16+ 0      18.0509     29.74  |    Q    |         |  V      |         |
16+ 5      18.4324     55.40  |         |Q        |   V     |         |
16+10      19.2674    121.25  |         |         |   QV    |         |
16+15      20.3302    154.32  |         |         |     V   Q         |
16+20      20.8454     74.80  |         |   Q     |      V  |         |
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16+25      21.1940     50.62  |          Q          |       V  |          |
16+30      21.4709     40.20  |        Q  |         |        V |          |
16+35      21.7168     35.71  |       Q   |         |        V |          |
16+40      21.9251     30.24  |      Q    |         |        V |          |
16+45      22.1028     25.80  |     Q     |         |         V|          |
16+50      22.2687     24.08  |    Q      |         |         V|          |
16+55      22.4253     22.74  |    Q      |         |         V|          |
17+ 0      22.5756     21.82  |    Q      |         |         V|          |
17+ 5      22.7159     20.37  |    Q      |         |         V|          |
17+10      22.8483     19.22  |   Q       |         |          V          |
17+15      22.9745     18.33  |   Q       |         |          V          |
17+20      23.0968     17.76  |   Q       |         |          V          |
17+25      23.2155     17.24  |   Q       |         |          V          |
17+30      23.3310     16.76  |   Q       |         |          V          |
17+35      23.4434     16.33  |   Q       |         |          V          |
17+40      23.5531     15.93  |   Q       |         |          V          |
17+45      23.6603     15.57  |   Q       |         |          |V         |
17+50      23.7652     15.23  |   Q       |         |          |V         |
17+55      23.8680     14.92  | Q         |         |          |V         |
18+ 0      23.9688     14.63  | Q         |         |          |V         |
18+ 5      24.0684     14.47  | Q         |         |          |V         |
18+10      24.1699     14.73  | Q         |         |          |V         |
18+15      24.2751     15.29  |  Q        |         |          |V         |
18+20      24.3810     15.37  |  Q        |         |          | V        |
18+25      24.4868     15.35  |  Q        |         |          | V        |
18+30      24.5920     15.28  |  Q        |         |          | V        |
18+35      24.6966     15.18  |  Q        |         |          | V        |
18+40      24.8003     15.06  |  Q        |         |          | V        |
18+45      24.9030     14.92  | Q         |         |          | V        |
18+50      25.0049     14.79  | Q         |         |          | V        |
18+55      25.1058     14.66  | Q         |         |          |  V       |
19+ 0      25.2059     14.53  | Q         |         |          |  V       |
19+ 5      25.3051     14.41  | Q         |         |          |  V       |
19+10      25.4035     14.28  | Q         |         |          |  V       |
19+15      25.5010     14.16  | Q         |         |          |  V       |
19+20      25.5978     14.05  | Q         |         |          |  V       |
19+25      25.6938     13.94  | Q         |         |          |  V       |
19+30      25.7890     13.83  | Q         |         |          |  V       |
19+35      25.8836     13.73  | Q         |         |          |   V      |
19+40      25.9775     13.63  | Q         |         |          |   V      |
19+45      26.0707     13.53  | Q         |         |          |   V      |
19+50      26.1632     13.44  | Q         |         |          |   V      |
19+55      26.2552     13.35  | Q         |         |          |   V      |
20+ 0      26.3465     13.26  | Q         |         |          |   V      |
20+ 5      26.4372     13.17  | Q         |         |          |   V      |
20+10      26.5274     13.09  | Q         |         |          |   V      |
20+15      26.6170     13.01  | Q         |         |          |    V     |
20+20      26.7060     12.93  | Q         |         |          |    V     |
20+25      26.7946     12.85  | Q         |         |          |    V     |
20+30      26.8826     12.78  | Q         |         |          |    V     |
20+35      26.9701     12.71  | Q         |         |          |    V     |
20+40      27.0571     12.64  | Q         |         |          |    V     |
20+45      27.1436     12.57  | Q         |         |          |    V     |
20+50      27.2297     12.50  | Q         |         |          |    V     |
20+55      27.3153     12.43  | Q         |         |          |    V     |
21+ 0      27.4005     12.37  | Q         |         |          |     V    |
21+ 5      27.4852     12.30  | Q         |         |          |     V    |
21+10      27.5695     12.24  | Q         |         |          |     V    |
21+15      27.6534     12.18  | Q         |         |          |     V    |
21+20      27.7369     12.12  | Q         |         |          |     V    |
21+25      27.8200     12.06  | Q         |         |          |     V    |
21+30      27.9027     12.01  | Q         |         |          |     V    |
21+35      27.9850     11.95  | Q         |         |          |     V    |
21+40      28.0670     11.90  | Q         |         |          |     V    |
21+45      28.1486     11.84  | Q         |         |          |      V   |
21+50      28.2298     11.79  | Q         |         |          |      V   |
21+55      28.3106     11.74  | Q         |         |          |      V   |
22+ 0      28.3911     11.69  | Q         |         |          |      V   |
22+ 5      28.4713     11.64  | Q         |         |          |      V   |
22+10      28.5512     11.59  | Q         |         |          |      V   |
22+15      28.6307     11.55  | Q         |         |          |      V   |
```

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   22+20      28.7099     11.50  | Q       |         |         |      V  |
   22+25      28.7887     11.45  | Q       |         |         |      V  |
   22+30      28.8673     11.41  | Q       |         |         |      V  |
   22+35      28.9456     11.36  | Q       |         |         |       V |
   22+40      29.0235     11.32  | Q       |         |         |       V |
   22+45      29.1012     11.28  | Q       |         |         |       V |
   22+50      29.1786     11.23  | Q       |         |         |       V |
   22+55      29.2557     11.19  | Q       |         |         |       V |
   23+ 0      29.3325     11.15  | Q       |         |         |       V |
   23+ 5      29.4090     11.11  | Q       |         |         |       V |
   23+10      29.4853     11.07  | Q       |         |         |       V |
   23+15      29.5613     11.03  | Q       |         |         |       V |
   23+20      29.6370     11.00  | Q       |         |         |       V |
   23+25      29.7125     10.96  | Q       |         |         |        V|
   23+30      29.7877     10.92  | Q       |         |         |        V|
   23+35      29.8626     10.88  | Q       |         |         |        V|
   23+40      29.9373     10.85  | Q       |         |         |        V|
   23+45      30.0118     10.81  | Q       |         |         |        V|
   23+50      30.0860     10.78  | Q       |         |         |        V|
   23+55      30.1600     10.74  | Q       |         |         |        V|
   24+ 0      30.2338     10.71  | Q       |         |         |        V|
   24+ 5      30.3039     10.18  | Q       |         |         |        V|
   24+10      30.3561      7.58  |Q        |         |         |        V|
   24+15      30.3811      3.62  Q         |         |         |        V|
   24+20      30.3959      2.16  Q         |         |         |        V|
   24+25      30.4050      1.31  Q         |         |         |        V|
   24+30      30.4103      0.77  Q         |         |         |        V|
   24+35      30.4132      0.43  Q         |         |         |        V|
   24+40      30.4148      0.24  Q         |         |         |        V|
   24+45      30.4159      0.16  Q         |         |         |        V|
   24+50      30.4166      0.10  Q         |         |         |        V|
   24+55      30.4171      0.07  Q         |         |         |        V|
   25+ 0      30.4173      0.03  Q         |         |         |        V|
   25+ 5      30.4173      0.01  Q         |         |         |         V
--------------------------------------------------------------------------
```

Area 'B' – 2 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

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                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
2 YEAR 24 HOUR STORM
DECEMBER 16, 2024
------------------------------------------------------------------------

        Storm Event Year = 2

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            11.61            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      60.6         11.61      1.000     0.671    1.000    0.671

Area-averaged adjusted loss rate Fm (In/Hr) =  0.671

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
11.61	1.000	78.0	60.6	6.50	0.198

Area-averaged catchment yield fraction, Y = 0.198
Area-averaged low loss fraction, Yb = 0.802
User entry of time of concentration = 0.201 (hours)
++
Watershed area = 11.61(Ac.)
Catchment Lag time = 0.161 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 51.9017
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.671(In/Hr)
Average low loss rate fraction (Yb) = 0.802 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 11.61(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.309(In)
30-minute factor = 0.999 Adjusted rainfall = 0.528(In)
1-hour factor = 0.999 Adjusted rainfall = 0.650(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 140.41 (CFS))	
1	4.513	6.337
2	27.025	31.608
3	64.721	52.928
4	78.816	19.791
5	86.936	11.401
6	92.180	7.362
7	95.551	4.734
8	97.548	2.804
9	98.388	1.180
10	98.917	0.742
11	99.278	0.508
12	99.655	0.529
13	99.883	0.321
14	100.000	0.164

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3085	0.3085
2	0.3798	0.0713
3	0.4289	0.0491
4	0.4676	0.0387
5	0.5000	0.0324
6	0.5281	0.0281
7	0.5531	0.0250
8	0.5757	0.0226
9	0.5964	0.0207
10	0.6156	0.0192
11	0.6334	0.0179
12	0.6502	0.0168

13	0.6836	0.0335
14	0.7162	0.0325
15	0.7478	0.0317
16	0.7787	0.0309
17	0.8089	0.0302
18	0.8385	0.0295
19	0.8674	0.0289
20	0.8957	0.0284
21	0.9236	0.0278
22	0.9509	0.0273
23	0.9778	0.0269
24	1.0043	0.0265
25	1.0303	0.0260
26	1.0560	0.0257
27	1.0813	0.0253
28	1.1062	0.0249
29	1.1308	0.0246
30	1.1551	0.0243
31	1.1791	0.0240
32	1.2029	0.0237
33	1.2263	0.0234
34	1.2495	0.0232
35	1.2724	0.0229
36	1.2951	0.0227
37	1.3175	0.0224
38	1.3397	0.0222
39	1.3617	0.0220
40	1.3835	0.0218
41	1.4051	0.0216
42	1.4265	0.0214
43	1.4477	0.0212
44	1.4687	0.0210
45	1.4895	0.0208
46	1.5102	0.0207
47	1.5307	0.0205
48	1.5510	0.0203
49	1.5712	0.0202
50	1.5913	0.0200
51	1.6111	0.0199
52	1.6309	0.0197
53	1.6505	0.0196
54	1.6699	0.0195
55	1.6892	0.0193
56	1.7084	0.0192
57	1.7275	0.0191
58	1.7464	0.0189
59	1.7652	0.0188
60	1.7839	0.0187
61	1.8025	0.0186
62	1.8210	0.0185
63	1.8393	0.0184
64	1.8576	0.0182
65	1.8757	0.0181
66	1.8938	0.0180
67	1.9117	0.0179
68	1.9295	0.0178
69	1.9473	0.0177
70	1.9649	0.0176
71	1.9825	0.0176
72	1.9999	0.0175
73	2.0138	0.0138
74	2.0275	0.0137
75	2.0412	0.0137
76	2.0547	0.0136
77	2.0682	0.0135
78	2.0816	0.0134
79	2.0949	0.0133
80	2.1081	0.0132
81	2.1212	0.0131
82	2.1343	0.0131
83	2.1473	0.0130

84	2.1602	0.0129
85	2.1730	0.0128
86	2.1857	0.0127
87	2.1984	0.0127
88	2.2110	0.0126
89	2.2235	0.0125
90	2.2360	0.0125
91	2.2484	0.0124
92	2.2607	0.0123
93	2.2730	0.0123
94	2.2851	0.0122
95	2.2973	0.0121
96	2.3093	0.0121
97	2.3213	0.0120
98	2.3333	0.0119
99	2.3451	0.0119
100	2.3569	0.0118
101	2.3687	0.0118
102	2.3804	0.0117
103	2.3920	0.0116
104	2.4036	0.0116
105	2.4152	0.0115
106	2.4266	0.0115
107	2.4380	0.0114
108	2.4494	0.0114
109	2.4607	0.0113
110	2.4720	0.0113
111	2.4832	0.0112
112	2.4944	0.0112
113	2.5055	0.0111
114	2.5165	0.0111
115	2.5276	0.0110
116	2.5385	0.0110
117	2.5494	0.0109
118	2.5603	0.0109
119	2.5711	0.0108
120	2.5819	0.0108
121	2.5927	0.0107
122	2.6033	0.0107
123	2.6140	0.0106
124	2.6246	0.0106
125	2.6352	0.0106
126	2.6457	0.0105
127	2.6562	0.0105
128	2.6666	0.0104
129	2.6770	0.0104
130	2.6873	0.0104
131	2.6977	0.0103
132	2.7079	0.0103
133	2.7182	0.0102
134	2.7284	0.0102
135	2.7385	0.0102
136	2.7487	0.0101
137	2.7588	0.0101
138	2.7688	0.0101
139	2.7788	0.0100
140	2.7888	0.0100
141	2.7987	0.0099
142	2.8086	0.0099
143	2.8185	0.0099
144	2.8284	0.0098
145	2.8382	0.0098
146	2.8479	0.0098
147	2.8577	0.0097
148	2.8674	0.0097
149	2.8770	0.0097
150	2.8867	0.0096
151	2.8963	0.0096
152	2.9059	0.0096
153	2.9154	0.0095
154	2.9249	0.0095

155	2.9344	0.0095
156	2.9438	0.0095
157	2.9533	0.0094
158	2.9627	0.0094
159	2.9720	0.0094
160	2.9814	0.0093
161	2.9907	0.0093
162	2.9999	0.0093
163	3.0092	0.0092
164	3.0184	0.0092
165	3.0276	0.0092
166	3.0367	0.0092
167	3.0459	0.0091
168	3.0550	0.0091
169	3.0641	0.0091
170	3.0731	0.0091
171	3.0821	0.0090
172	3.0911	0.0090
173	3.1001	0.0090
174	3.1091	0.0089
175	3.1180	0.0089
176	3.1269	0.0089
177	3.1357	0.0089
178	3.1446	0.0088
179	3.1534	0.0088
180	3.1622	0.0088
181	3.1710	0.0088
182	3.1797	0.0087
183	3.1885	0.0087
184	3.1972	0.0087
185	3.2058	0.0087
186	3.2145	0.0087
187	3.2231	0.0086
188	3.2317	0.0086
189	3.2403	0.0086
190	3.2489	0.0086
191	3.2574	0.0085
192	3.2659	0.0085
193	3.2744	0.0085
194	3.2829	0.0085
195	3.2913	0.0085
196	3.2998	0.0084
197	3.3082	0.0084
198	3.3166	0.0084
199	3.3249	0.0084
200	3.3333	0.0083
201	3.3416	0.0083
202	3.3499	0.0083
203	3.3582	0.0083
204	3.3664	0.0083
205	3.3747	0.0082
206	3.3829	0.0082
207	3.3911	0.0082
208	3.3993	0.0082
209	3.4074	0.0082
210	3.4156	0.0081
211	3.4237	0.0081
212	3.4318	0.0081
213	3.4399	0.0081
214	3.4480	0.0081
215	3.4560	0.0080
216	3.4640	0.0080
217	3.4720	0.0080
218	3.4800	0.0080
219	3.4880	0.0080
220	3.4960	0.0080
221	3.5039	0.0079
222	3.5118	0.0079
223	3.5197	0.0079
224	3.5276	0.0079
225	3.5355	0.0079

226	3.5433	0.0078
227	3.5511	0.0078
228	3.5590	0.0078
229	3.5668	0.0078
230	3.5745	0.0078
231	3.5823	0.0078
232	3.5900	0.0077
233	3.5978	0.0077
234	3.6055	0.0077
235	3.6132	0.0077
236	3.6209	0.0077
237	3.6285	0.0077
238	3.6362	0.0076
239	3.6438	0.0076
240	3.6514	0.0076
241	3.6590	0.0076
242	3.6666	0.0076
243	3.6742	0.0076
244	3.6817	0.0076
245	3.6893	0.0075
246	3.6968	0.0075
247	3.7043	0.0075
248	3.7118	0.0075
249	3.7193	0.0075
250	3.7267	0.0075
251	3.7342	0.0074
252	3.7416	0.0074
253	3.7490	0.0074
254	3.7564	0.0074
255	3.7638	0.0074
256	3.7712	0.0074
257	3.7785	0.0074
258	3.7859	0.0073
259	3.7932	0.0073
260	3.8005	0.0073
261	3.8078	0.0073
262	3.8151	0.0073
263	3.8224	0.0073
264	3.8296	0.0073
265	3.8369	0.0072
266	3.8441	0.0072
267	3.8513	0.0072
268	3.8586	0.0072
269	3.8657	0.0072
270	3.8729	0.0072
271	3.8801	0.0072
272	3.8872	0.0072
273	3.8944	0.0071
274	3.9015	0.0071
275	3.9086	0.0071
276	3.9157	0.0071
277	3.9228	0.0071
278	3.9299	0.0071
279	3.9369	0.0071
280	3.9440	0.0070
281	3.9510	0.0070
282	3.9581	0.0070
283	3.9651	0.0070
284	3.9721	0.0070
285	3.9791	0.0070
286	3.9860	0.0070
287	3.9930	0.0070
288	3.9999	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0056	0.0014
2	0.0070	0.0056	0.0014
3	0.0070	0.0056	0.0014

4	0.0070	0.0056	0.0014
5	0.0070	0.0056	0.0014
6	0.0070	0.0056	0.0014
7	0.0071	0.0057	0.0014
8	0.0071	0.0057	0.0014
9	0.0071	0.0057	0.0014
10	0.0071	0.0057	0.0014
11	0.0071	0.0057	0.0014
12	0.0072	0.0057	0.0014
13	0.0072	0.0058	0.0014
14	0.0072	0.0058	0.0014
15	0.0072	0.0058	0.0014
16	0.0072	0.0058	0.0014
17	0.0073	0.0058	0.0014
18	0.0073	0.0058	0.0014
19	0.0073	0.0059	0.0014
20	0.0073	0.0059	0.0014
21	0.0073	0.0059	0.0015
22	0.0074	0.0059	0.0015
23	0.0074	0.0059	0.0015
24	0.0074	0.0059	0.0015
25	0.0074	0.0060	0.0015
26	0.0074	0.0060	0.0015
27	0.0075	0.0060	0.0015
28	0.0075	0.0060	0.0015
29	0.0075	0.0060	0.0015
30	0.0075	0.0060	0.0015
31	0.0076	0.0061	0.0015
32	0.0076	0.0061	0.0015
33	0.0076	0.0061	0.0015
34	0.0076	0.0061	0.0015
35	0.0077	0.0061	0.0015
36	0.0077	0.0062	0.0015
37	0.0077	0.0062	0.0015
38	0.0077	0.0062	0.0015
39	0.0078	0.0062	0.0015
40	0.0078	0.0062	0.0015
41	0.0078	0.0063	0.0015
42	0.0078	0.0063	0.0016
43	0.0079	0.0063	0.0016
44	0.0079	0.0063	0.0016
45	0.0079	0.0064	0.0016
46	0.0079	0.0064	0.0016
47	0.0080	0.0064	0.0016
48	0.0080	0.0064	0.0016
49	0.0080	0.0064	0.0016
50	0.0080	0.0065	0.0016
51	0.0081	0.0065	0.0016
52	0.0081	0.0065	0.0016
53	0.0081	0.0065	0.0016
54	0.0082	0.0065	0.0016
55	0.0082	0.0066	0.0016
56	0.0082	0.0066	0.0016
57	0.0083	0.0066	0.0016
58	0.0083	0.0066	0.0016
59	0.0083	0.0067	0.0016
60	0.0083	0.0067	0.0017
61	0.0084	0.0067	0.0017
62	0.0084	0.0067	0.0017
63	0.0085	0.0068	0.0017
64	0.0085	0.0068	0.0017
65	0.0085	0.0068	0.0017
66	0.0085	0.0068	0.0017
67	0.0086	0.0069	0.0017
68	0.0086	0.0069	0.0017
69	0.0087	0.0069	0.0017
70	0.0087	0.0070	0.0017
71	0.0087	0.0070	0.0017
72	0.0087	0.0070	0.0017
73	0.0088	0.0071	0.0017
74	0.0088	0.0071	0.0017

75	0.0089	0.0071	0.0018
76	0.0089	0.0071	0.0018
77	0.0089	0.0072	0.0018
78	0.0090	0.0072	0.0018
79	0.0090	0.0072	0.0018
80	0.0091	0.0073	0.0018
81	0.0091	0.0073	0.0018
82	0.0091	0.0073	0.0018
83	0.0092	0.0074	0.0018
84	0.0092	0.0074	0.0018
85	0.0093	0.0074	0.0018
86	0.0093	0.0075	0.0018
87	0.0094	0.0075	0.0019
88	0.0094	0.0075	0.0019
89	0.0095	0.0076	0.0019
90	0.0095	0.0076	0.0019
91	0.0095	0.0077	0.0019
92	0.0096	0.0077	0.0019
93	0.0096	0.0077	0.0019
94	0.0097	0.0078	0.0019
95	0.0097	0.0078	0.0019
96	0.0098	0.0078	0.0019
97	0.0098	0.0079	0.0019
98	0.0099	0.0079	0.0020
99	0.0099	0.0080	0.0020
100	0.0100	0.0080	0.0020
101	0.0101	0.0081	0.0020
102	0.0101	0.0081	0.0020
103	0.0102	0.0081	0.0020
104	0.0102	0.0082	0.0020
105	0.0103	0.0082	0.0020
106	0.0103	0.0083	0.0020
107	0.0104	0.0083	0.0021
108	0.0104	0.0084	0.0021
109	0.0105	0.0084	0.0021
110	0.0106	0.0085	0.0021
111	0.0106	0.0085	0.0021
112	0.0107	0.0086	0.0021
113	0.0108	0.0086	0.0021
114	0.0108	0.0087	0.0021
115	0.0109	0.0088	0.0022
116	0.0110	0.0088	0.0022
117	0.0111	0.0089	0.0022
118	0.0111	0.0089	0.0022
119	0.0112	0.0090	0.0022
120	0.0113	0.0090	0.0022
121	0.0114	0.0091	0.0023
122	0.0114	0.0092	0.0023
123	0.0115	0.0092	0.0023
124	0.0116	0.0093	0.0023
125	0.0117	0.0094	0.0023
126	0.0118	0.0094	0.0023
127	0.0119	0.0095	0.0024
128	0.0119	0.0096	0.0024
129	0.0121	0.0097	0.0024
130	0.0121	0.0097	0.0024
131	0.0123	0.0098	0.0024
132	0.0123	0.0099	0.0024
133	0.0125	0.0100	0.0025
134	0.0125	0.0100	0.0025
135	0.0127	0.0102	0.0025
136	0.0127	0.0102	0.0025
137	0.0129	0.0103	0.0026
138	0.0130	0.0104	0.0026
139	0.0131	0.0105	0.0026
140	0.0132	0.0106	0.0026
141	0.0134	0.0107	0.0027
142	0.0135	0.0108	0.0027
143	0.0137	0.0110	0.0027
144	0.0137	0.0110	0.0027
145	0.0175	0.0140	0.0035

146	0.0176	0.0141	0.0035
147	0.0177	0.0142	0.0035
148	0.0178	0.0143	0.0035
149	0.0180	0.0145	0.0036
150	0.0181	0.0145	0.0036
151	0.0184	0.0147	0.0036
152	0.0185	0.0148	0.0037
153	0.0187	0.0150	0.0037
154	0.0188	0.0151	0.0037
155	0.0191	0.0153	0.0038
156	0.0192	0.0154	0.0038
157	0.0195	0.0156	0.0039
158	0.0196	0.0157	0.0039
159	0.0199	0.0159	0.0039
160	0.0200	0.0161	0.0040
161	0.0203	0.0163	0.0040
162	0.0205	0.0164	0.0041
163	0.0208	0.0167	0.0041
164	0.0210	0.0169	0.0042
165	0.0214	0.0172	0.0042
166	0.0216	0.0173	0.0043
167	0.0220	0.0176	0.0044
168	0.0222	0.0178	0.0044
169	0.0227	0.0182	0.0045
170	0.0229	0.0184	0.0045
171	0.0234	0.0188	0.0046
172	0.0237	0.0190	0.0047
173	0.0243	0.0195	0.0048
174	0.0246	0.0197	0.0049
175	0.0253	0.0203	0.0050
176	0.0257	0.0206	0.0051
177	0.0265	0.0212	0.0052
178	0.0269	0.0216	0.0053
179	0.0278	0.0223	0.0055
180	0.0284	0.0227	0.0056
181	0.0295	0.0237	0.0058
182	0.0302	0.0242	0.0060
183	0.0317	0.0254	0.0063
184	0.0325	0.0261	0.0064
185	0.0168	0.0134	0.0033
186	0.0179	0.0143	0.0035
187	0.0207	0.0166	0.0041
188	0.0226	0.0181	0.0045
189	0.0281	0.0225	0.0056
190	0.0324	0.0260	0.0064
191	0.0491	0.0394	0.0097
192	0.0713	0.0559	0.0154
193	0.3085	0.0559	0.2526
194	0.0387	0.0310	0.0077
195	0.0250	0.0200	0.0049
196	0.0192	0.0154	0.0038
197	0.0335	0.0268	0.0066
198	0.0309	0.0248	0.0061
199	0.0289	0.0232	0.0057
200	0.0273	0.0219	0.0054
201	0.0260	0.0209	0.0052
202	0.0249	0.0200	0.0049
203	0.0240	0.0193	0.0048
204	0.0232	0.0186	0.0046
205	0.0224	0.0180	0.0044
206	0.0218	0.0175	0.0043
207	0.0212	0.0170	0.0042
208	0.0207	0.0166	0.0041
209	0.0202	0.0162	0.0040
210	0.0197	0.0158	0.0039
211	0.0193	0.0155	0.0038
212	0.0189	0.0152	0.0037
213	0.0186	0.0149	0.0037
214	0.0182	0.0146	0.0036
215	0.0179	0.0144	0.0036
216	0.0176	0.0142	0.0035

217	0.0138	0.0111	0.0027
218	0.0136	0.0109	0.0027
219	0.0133	0.0107	0.0026
220	0.0131	0.0105	0.0026
221	0.0128	0.0103	0.0025
222	0.0126	0.0101	0.0025
223	0.0124	0.0099	0.0025
224	0.0122	0.0098	0.0024
225	0.0120	0.0096	0.0024
226	0.0118	0.0095	0.0023
227	0.0116	0.0093	0.0023
228	0.0115	0.0092	0.0023
229	0.0113	0.0091	0.0022
230	0.0112	0.0090	0.0022
231	0.0110	0.0088	0.0022
232	0.0109	0.0087	0.0022
233	0.0107	0.0086	0.0021
234	0.0106	0.0085	0.0021
235	0.0105	0.0084	0.0021
236	0.0104	0.0083	0.0021
237	0.0102	0.0082	0.0020
238	0.0101	0.0081	0.0020
239	0.0100	0.0080	0.0020
240	0.0099	0.0079	0.0020
241	0.0098	0.0079	0.0019
242	0.0097	0.0078	0.0019
243	0.0096	0.0077	0.0019
244	0.0095	0.0076	0.0019
245	0.0094	0.0076	0.0019
246	0.0093	0.0075	0.0018
247	0.0092	0.0074	0.0018
248	0.0092	0.0073	0.0018
249	0.0091	0.0073	0.0018
250	0.0090	0.0072	0.0018
251	0.0089	0.0072	0.0018
252	0.0088	0.0071	0.0018
253	0.0088	0.0070	0.0017
254	0.0087	0.0070	0.0017
255	0.0086	0.0069	0.0017
256	0.0086	0.0069	0.0017
257	0.0085	0.0068	0.0017
258	0.0084	0.0068	0.0017
259	0.0084	0.0067	0.0017
260	0.0083	0.0067	0.0016
261	0.0082	0.0066	0.0016
262	0.0082	0.0066	0.0016
263	0.0081	0.0065	0.0016
264	0.0081	0.0065	0.0016
265	0.0080	0.0064	0.0016
266	0.0080	0.0064	0.0016
267	0.0079	0.0063	0.0016
268	0.0078	0.0063	0.0016
269	0.0078	0.0063	0.0015
270	0.0077	0.0062	0.0015
271	0.0077	0.0062	0.0015
272	0.0076	0.0061	0.0015
273	0.0076	0.0061	0.0015
274	0.0076	0.0061	0.0015
275	0.0075	0.0060	0.0015
276	0.0075	0.0060	0.0015
277	0.0074	0.0059	0.0015
278	0.0074	0.0059	0.0015
279	0.0073	0.0059	0.0015
280	0.0073	0.0058	0.0014
281	0.0072	0.0058	0.0014
282	0.0072	0.0058	0.0014
283	0.0072	0.0057	0.0014
284	0.0071	0.0057	0.0014
285	0.0071	0.0057	0.0014
286	0.0070	0.0057	0.0014
287	0.0070	0.0056	0.0014

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      288             0.0070          0.0056             0.0014
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.02(In)
      Total effective rainfall =      0.98(In)
      Peak flow rate in flood hydrograph =     14.16(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0001      0.01  Q          |          |          |          |
  0+10       0.0004      0.05  Q          |          |          |          |
  0+15       0.0013      0.13  Q          |          |          |          |
  0+20       0.0023      0.15  Q          |          |          |          |
  0+25       0.0035      0.17  Q          |          |          |          |
  0+30       0.0047      0.18  Q          |          |          |          |
  0+35       0.0060      0.19  Q          |          |          |          |
  0+40       0.0073      0.19  Q          |          |          |          |
  0+45       0.0087      0.19  Q          |          |          |          |
  0+50       0.0100      0.19  Q          |          |          |          |
  0+55       0.0113      0.20  Q          |          |          |          |
  1+ 0       0.0127      0.20  Q          |          |          |          |
  1+ 5       0.0141      0.20  Q          |          |          |          |
  1+10       0.0154      0.20  Q          |          |          |          |
  1+15       0.0168      0.20  Q          |          |          |          |
  1+20       0.0182      0.20  Q          |          |          |          |
  1+25       0.0196      0.20  Q          |          |          |          |
  1+30       0.0209      0.20  Q          |          |          |          |
  1+35       0.0223      0.20  Q          |          |          |          |
  1+40       0.0237      0.20  Q          |          |          |          |
  1+45       0.0251      0.20  QV         |          |          |          |
  1+50       0.0265      0.20  QV         |          |          |          |
  1+55       0.0279      0.20  QV         |          |          |          |
  2+ 0       0.0293      0.20  QV         |          |          |          |
  2+ 5       0.0307      0.20  QV         |          |          |          |
  2+10       0.0322      0.21  QV         |          |          |          |
  2+15       0.0336      0.21  QV         |          |          |          |
  2+20       0.0350      0.21  QV         |          |          |          |
  2+25       0.0364      0.21  QV         |          |          |          |
  2+30       0.0379      0.21  QV         |          |          |          |
  2+35       0.0393      0.21  QV         |          |          |          |
  2+40       0.0407      0.21  QV         |          |          |          |
  2+45       0.0422      0.21  QV         |          |          |          |
  2+50       0.0436      0.21  QV         |          |          |          |
  2+55       0.0451      0.21  QV         |          |          |          |
  3+ 0       0.0465      0.21  QV         |          |          |          |
  3+ 5       0.0480      0.21  Q V        |          |          |          |
  3+10       0.0495      0.21  Q V        |          |          |          |
  3+15       0.0510      0.21  Q V        |          |          |          |
  3+20       0.0524      0.21  Q V        |          |          |          |
  3+25       0.0539      0.22  Q V        |          |          |          |
  3+30       0.0554      0.22  Q V        |          |          |          |
  3+35       0.0569      0.22  Q V        |          |          |          |
  3+40       0.0584      0.22  Q V        |          |          |          |
  3+45       0.0599      0.22  Q V        |          |          |          |
  3+50       0.0614      0.22  Q V        |          |          |          |
  3+55       0.0629      0.22  Q V        |          |          |          |
  4+ 0       0.0644      0.22  Q V        |          |          |          |
  4+ 5       0.0660      0.22  Q V        |          |          |          |
  4+10       0.0675      0.22  Q V        |          |          |          |
  4+15       0.0690      0.22  Q V        |          |          |          |
  4+20       0.0706      0.22  Q V        |          |          |          |
  4+25       0.0721      0.22  Q  V       |          |          |          |
  4+30       0.0737      0.22  Q  V       |          |          |          |
  4+35       0.0752      0.23  Q  V       |          |          |          |
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 4+40      0.0768      0.23  Q  V      |          |          |          |
 4+45      0.0783      0.23  Q  V      |          |          |          |
 4+50      0.0799      0.23  Q  V      |          |          |          |
 4+55      0.0815      0.23  Q  V      |          |          |          |
 5+ 0      0.0831      0.23  Q  V      |          |          |          |
 5+ 5      0.0847      0.23  Q  V      |          |          |          |
 5+10      0.0863      0.23  Q  V      |          |          |          |
 5+15      0.0879      0.23  Q  V      |          |          |          |
 5+20      0.0895      0.23  Q  V      |          |          |          |
 5+25      0.0911      0.23  Q  V      |          |          |          |
 5+30      0.0927      0.24  Q  V      |          |          |          |
 5+35      0.0943      0.24  Q  V      |          |          |          |
 5+40      0.0960      0.24  Q   V     |          |          |          |
 5+45      0.0976      0.24  Q   V     |          |          |          |
 5+50      0.0992      0.24  Q   V     |          |          |          |
 5+55      0.1009      0.24  Q   V     |          |          |          |
 6+ 0      0.1026      0.24  Q   V     |          |          |          |
 6+ 5      0.1042      0.24  Q   V     |          |          |          |
 6+10      0.1059      0.24  Q   V     |          |          |          |
 6+15      0.1076      0.24  Q   V     |          |          |          |
 6+20      0.1093      0.24  Q   V     |          |          |          |
 6+25      0.1109      0.25  Q   V     |          |          |          |
 6+30      0.1126      0.25  Q   V     |          |          |          |
 6+35      0.1144      0.25  Q   V     |          |          |          |
 6+40      0.1161      0.25  Q   V     |          |          |          |
 6+45      0.1178      0.25  Q   V     |          |          |          |
 6+50      0.1195      0.25  Q    V    |          |          |          |
 6+55      0.1213      0.25  Q    V    |          |          |          |
 7+ 0      0.1230      0.25  Q    V    |          |          |          |
 7+ 5      0.1248      0.25  Q    V    |          |          |          |
 7+10      0.1265      0.26  Q    V    |          |          |          |
 7+15      0.1283      0.26  Q    V    |          |          |          |
 7+20      0.1301      0.26  Q    V    |          |          |          |
 7+25      0.1319      0.26  Q    V    |          |          |          |
 7+30      0.1337      0.26  Q    V    |          |          |          |
 7+35      0.1355      0.26  Q    V    |          |          |          |
 7+40      0.1373      0.26  Q    V    |          |          |          |
 7+45      0.1391      0.26  Q    V    |          |          |          |
 7+50      0.1409      0.27  Q    V    |          |          |          |
 7+55      0.1428      0.27  Q    V    |          |          |          |
 8+ 0      0.1446      0.27  Q     V   |          |          |          |
 8+ 5      0.1465      0.27  Q     V   |          |          |          |
 8+10      0.1483      0.27  Q     V   |          |          |          |
 8+15      0.1502      0.27  Q     V   |          |          |          |
 8+20      0.1521      0.27  Q     V   |          |          |          |
 8+25      0.1540      0.28  Q     V   |          |          |          |
 8+30      0.1559      0.28  Q     V   |          |          |          |
 8+35      0.1578      0.28  Q     V   |          |          |          |
 8+40      0.1597      0.28  Q     V   |          |          |          |
 8+45      0.1617      0.28  Q     V   |          |          |          |
 8+50      0.1636      0.28  Q     V   |          |          |          |
 8+55      0.1656      0.28  Q     V   |          |          |          |
 9+ 0      0.1676      0.29  Q      V  |          |          |          |
 9+ 5      0.1695      0.29  Q      V  |          |          |          |
 9+10      0.1715      0.29  Q      V  |          |          |          |
 9+15      0.1735      0.29  Q      V  |          |          |          |
 9+20      0.1756      0.29  Q      V  |          |          |          |
 9+25      0.1776      0.29  Q      V  |          |          |          |
 9+30      0.1796      0.30  Q      V  |          |          |          |
 9+35      0.1817      0.30  Q      V  |          |          |          |
 9+40      0.1838      0.30  Q      V  |          |          |          |
 9+45      0.1858      0.30  Q      V  |          |          |          |
 9+50      0.1879      0.30  Q      V  |          |          |          |
 9+55      0.1900      0.31  Q      V  |          |          |          |
10+ 0      0.1922      0.31  Q       V |          |          |          |
10+ 5      0.1943      0.31  Q       V |          |          |          |
10+10      0.1965      0.31  Q       V |          |          |          |
10+15      0.1986      0.31  Q       V |          |          |          |
10+20      0.2008      0.32  Q       V |          |          |          |
10+25      0.2030      0.32  Q       V |          |          |          |
10+30      0.2052      0.32  Q       V |          |          |          |
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10+35      0.2074     0.32  Q       V |         |          |         |
10+40      0.2097     0.33  Q       V |         |          |         |
10+45      0.2120     0.33  Q       V |         |          |         |
10+50      0.2142     0.33  Q       V |         |          |         |
10+55      0.2165     0.33  Q        V|         |          |         |
11+ 0      0.2188     0.34  Q        V|         |          |         |
11+ 5      0.2212     0.34  Q        V|         |          |         |
11+10      0.2235     0.34  Q        V|         |          |         |
11+15      0.2259     0.34  Q        V|         |          |         |
11+20      0.2283     0.35  Q        V|         |          |         |
11+25      0.2307     0.35  Q        V|         |          |         |
11+30      0.2331     0.35  Q        V|         |          |         |
11+35      0.2356     0.36  Q        V|         |          |         |
11+40      0.2381     0.36  Q        V|         |          |         |
11+45      0.2406     0.36  Q         V         |          |         |
11+50      0.2431     0.37  Q         V         |          |         |
11+55      0.2456     0.37  Q         V         |          |         |
12+ 0      0.2482     0.37  Q         V         |          |         |
12+ 5      0.2508     0.38  Q         V         |          |         |
12+10      0.2536     0.41  Q         V         |          |         |
12+15      0.2567     0.45  Q         V         |          |         |
12+20      0.2599     0.47  Q         V         |          |         |
12+25      0.2632     0.48  Q         |V        |          |         |
12+30      0.2666     0.49  Q         |V        |          |         |
12+35      0.2700     0.49  Q         |V        |          |         |
12+40      0.2734     0.50  |Q        |V        |          |         |
12+45      0.2769     0.51  |Q        |V        |          |         |
12+50      0.2804     0.51  |Q        |V        |          |         |
12+55      0.2840     0.52  |Q        |V        |          |         |
13+ 0      0.2876     0.52  |Q        | V       |          |         |
13+ 5      0.2912     0.53  |Q        | V       |          |         |
13+10      0.2949     0.53  |Q        | V       |          |         |
13+15      0.2986     0.54  |Q        | V       |          |         |
13+20      0.3023     0.54  |Q        | V       |          |         |
13+25      0.3061     0.55  |Q        | V       |          |         |
13+30      0.3099     0.55  |Q        |  V      |          |         |
13+35      0.3138     0.56  |Q        |  V      |          |         |
13+40      0.3177     0.57  |Q        |  V      |          |         |
13+45      0.3216     0.57  |Q        |  V      |          |         |
13+50      0.3256     0.58  |Q        |  V      |          |         |
13+55      0.3297     0.59  |Q        |  V      |          |         |
14+ 0      0.3338     0.60  |Q        |   V     |          |         |
14+ 5      0.3380     0.61  |Q        |   V     |          |         |
14+10      0.3422     0.61  |Q        |   V     |          |         |
14+15      0.3465     0.62  |Q        |   V     |          |         |
14+20      0.3509     0.63  |Q        |   V     |          |         |
14+25      0.3553     0.64  |Q        |   V     |          |         |
14+30      0.3598     0.66  |Q        |    V    |          |         |
14+35      0.3644     0.67  |Q        |    V    |          |         |
14+40      0.3691     0.68  |Q        |    V    |          |         |
14+45      0.3739     0.69  |Q        |    V    |          |         |
14+50      0.3788     0.71  |Q        |    V    |          |         |
14+55      0.3838     0.73  |Q        |     V   |          |         |
15+ 0      0.3889     0.74  |Q        |     V   |          |         |
15+ 5      0.3942     0.76  |Q        |     V   |          |         |
15+10      0.3995     0.78  |Q        |     V   |          |         |
15+15      0.4051     0.81  |Q        |      V  |          |         |
15+20      0.4108     0.83  |Q        |      V  |          |         |
15+25      0.4166     0.84  |Q        |      V  |          |         |
15+30      0.4219     0.76  |Q        |      V  |          |         |
15+35      0.4261     0.62  |Q        |      V  |          |         |
15+40      0.4302     0.59  |Q        |       V |          |         |
15+45      0.4345     0.61  |Q        |       V |          |         |
15+50      0.4391     0.67  |Q        |       V |          |         |
15+55      0.4444     0.77  |Q        |       V |          |         |
16+ 0      0.4512     0.98  |Q        |       V |          |         |
16+ 5      0.4709     2.87  |    Q    |        V|          |         |
16+10      0.5343     9.20  |         |       Q | V        |         |
16+15      0.6318    14.16  |         |         |     V Q  |         |
16+20      0.6724     5.89  |         |Q        |       V  |         |
16+25      0.6975     3.65  |      Q  |         |        V|         |
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16+30       0.7155      2.61  |    Q    |         |         V         |
16+35       0.7295      2.03  |   Q     |         |         V         |
16+40       0.7400      1.53  |  Q      |         |         |V        |
16+45       0.7476      1.10  | Q       |         |         |V        |
16+50       0.7541      0.96  |Q        |         |         |V        |
16+55       0.7601      0.87  |Q        |         |         |V        |
17+ 0       0.7660      0.85  |Q        |         |         | V       |
17+ 5       0.7712      0.77  |Q        |         |         | V       |
17+10       0.7761      0.70  |Q        |         |         | V       |
17+15       0.7805      0.64  |Q        |         |         | V       |
17+20       0.7847      0.62  |Q        |         |         | V       |
17+25       0.7889      0.60  |Q        |         |         |  V      |
17+30       0.7929      0.59  |Q        |         |         |  V      |
17+35       0.7969      0.57  |Q        |         |         |  V      |
17+40       0.8007      0.56  |Q        |         |         |  V      |
17+45       0.8045      0.55  |Q        |         |         |  V      |
17+50       0.8081      0.53  |Q        |         |         |  V      |
17+55       0.8117      0.52  |Q        |         |         |   V     |
18+ 0       0.8153      0.51  |Q        |         |         |   V     |
18+ 5       0.8187      0.50  |Q        |         |         |   V     |
18+10       0.8220      0.47  Q         |         |         |   V     |
18+15       0.8249      0.42  Q         |         |         |   V     |
18+20       0.8277      0.40  Q         |         |         |   V     |
18+25       0.8303      0.39  Q         |         |         |   V     |
18+30       0.8329      0.38  Q         |         |         |   V     |
18+35       0.8354      0.37  Q         |         |         |    V    |
18+40       0.8379      0.36  Q         |         |         |    V    |
18+45       0.8403      0.35  Q         |         |         |    V    |
18+50       0.8427      0.34  Q         |         |         |    V    |
18+55       0.8450      0.34  Q         |         |         |    V    |
19+ 0       0.8473      0.33  Q         |         |         |    V    |
19+ 5       0.8495      0.33  Q         |         |         |    V    |
19+10       0.8517      0.32  Q         |         |         |    V    |
19+15       0.8539      0.32  Q         |         |         |    V    |
19+20       0.8561      0.31  Q         |         |         |    V    |
19+25       0.8582      0.31  Q         |         |         |     V   |
19+30       0.8603      0.30  Q         |         |         |     V   |
19+35       0.8624      0.30  Q         |         |         |     V   |
19+40       0.8644      0.30  Q         |         |         |     V   |
19+45       0.8664      0.29  Q         |         |         |     V   |
19+50       0.8684      0.29  Q         |         |         |     V   |
19+55       0.8704      0.29  Q         |         |         |     V   |
20+ 0       0.8724      0.28  Q         |         |         |     V   |
20+ 5       0.8743      0.28  Q         |         |         |     V   |
20+10       0.8762      0.28  Q         |         |         |     V   |
20+15       0.8781      0.27  Q         |         |         |     V   |
20+20       0.8800      0.27  Q         |         |         |     V   |
20+25       0.8818      0.27  Q         |         |         |      V  |
20+30       0.8837      0.27  Q         |         |         |      V  |
20+35       0.8855      0.26  Q         |         |         |      V  |
20+40       0.8873      0.26  Q         |         |         |      V  |
20+45       0.8890      0.26  Q         |         |         |      V  |
20+50       0.8908      0.26  Q         |         |         |      V  |
20+55       0.8926      0.25  Q         |         |         |      V  |
21+ 0       0.8943      0.25  Q         |         |         |      V  |
21+ 5       0.8960      0.25  Q         |         |         |      V  |
21+10       0.8977      0.25  Q         |         |         |      V  |
21+15       0.8994      0.25  Q         |         |         |      V  |
21+20       0.9011      0.24  Q         |         |         |      V  |
21+25       0.9027      0.24  Q         |         |         |      V  |
21+30       0.9044      0.24  Q         |         |         |      V  |
21+35       0.9060      0.24  Q         |         |         |       V |
21+40       0.9076      0.24  Q         |         |         |       V |
21+45       0.9093      0.23  Q         |         |         |       V |
21+50       0.9108      0.23  Q         |         |         |       V |
21+55       0.9124      0.23  Q         |         |         |       V |
22+ 0       0.9140      0.23  Q         |         |         |       V |
22+ 5       0.9156      0.23  Q         |         |         |       V |
22+10       0.9171      0.23  Q         |         |         |       V |
22+15       0.9187      0.22  Q         |         |         |       V |
22+20       0.9202      0.22  Q         |         |         |       V |
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   22+25       0.9217      0.22  Q          |          |          |       V |
   22+30       0.9232      0.22  Q          |          |          |       V |
   22+35       0.9247      0.22  Q          |          |          |       V |
   22+40       0.9262      0.22  Q          |          |          |       V |
   22+45       0.9277      0.21  Q          |          |          |       V |
   22+50       0.9292      0.21  Q          |          |          |        V|
   22+55       0.9306      0.21  Q          |          |          |        V|
   23+ 0       0.9321      0.21  Q          |          |          |        V|
   23+ 5       0.9335      0.21  Q          |          |          |        V|
   23+10       0.9349      0.21  Q          |          |          |        V|
   23+15       0.9364      0.21  Q          |          |          |        V|
   23+20       0.9378      0.21  Q          |          |          |        V|
   23+25       0.9392      0.20  Q          |          |          |        V|
   23+30       0.9406      0.20  Q          |          |          |        V|
   23+35       0.9420      0.20  Q          |          |          |        V|
   23+40       0.9434      0.20  Q          |          |          |        V|
   23+45       0.9447      0.20  Q          |          |          |        V|
   23+50       0.9461      0.20  Q          |          |          |        V|
   23+55       0.9475      0.20  Q          |          |          |        V|
   24+ 0       0.9488      0.20  Q          |          |          |        V|
   24+ 5       0.9501      0.19  Q          |          |          |        V|
   24+10       0.9511      0.14  Q          |          |          |        V|
   24+15       0.9516      0.07  Q          |          |          |        V|
   24+20       0.9519      0.04  Q          |          |          |        V|
   24+25       0.9520      0.03  Q          |          |          |        V|
   24+30       0.9521      0.02  Q          |          |          |        V|
   24+35       0.9522      0.01  Q          |          |          |        V|
   24+40       0.9522      0.00  Q          |          |          |        V|
   24+45       0.9523      0.00  Q          |          |          |        V|
   24+50       0.9523      0.00  Q          |          |          |        V|
   24+55       0.9523      0.00  Q          |          |          |        V|
   25+ 0       0.9523      0.00  Q          |          |          |        V|
   25+ 5       0.9523      0.00  Q          |          |          |         V
------------------------------------------------------------------------------
```

Area 'B' – 5 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
5 YEAR 24 HOUR STORM
DECEMBER 16, 2024
------------------------------------------------------------------------

        Storm Event Year = 5

        Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            11.61            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      60.6         11.61      1.000     0.671    1.000    0.671

Area-averaged adjusted loss rate Fm (In/Hr) =  0.671

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
11.61	1.000	78.0	60.6	6.50	0.322

Area-averaged catchment yield fraction, Y = 0.322
Area-averaged low loss fraction, Yb = 0.678
User entry of time of concentration = 0.201 (hours)
++
Watershed area = 11.61(Ac.)
Catchment Lag time = 0.161 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 51.9017
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.671(In/Hr)
Average low loss rate fraction (Yb) = 0.678 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 11.61(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.403(In)
30-minute factor = 0.999 Adjusted rainfall = 0.690(In)
1-hour factor = 0.999 Adjusted rainfall = 0.849(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.585(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

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

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 140.41 (CFS))	
1	4.513	6.337
2	27.025	31.608
3	64.721	52.928
4	78.816	19.791
5	86.936	11.401
6	92.180	7.362
7	95.551	4.734
8	97.548	2.804
9	98.388	1.180
10	98.917	0.742
11	99.278	0.508
12	99.655	0.529
13	99.883	0.321
14	100.000	0.164

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4029	0.4029
2	0.4960	0.0931
3	0.5601	0.0642
4	0.6106	0.0505
5	0.6529	0.0423
6	0.6896	0.0367
7	0.7223	0.0326
8	0.7518	0.0295
9	0.7788	0.0270
10	0.8038	0.0250
11	0.8271	0.0233
12	0.8490	0.0219

13	0.8923	0.0433
14	0.9344	0.0421
15	0.9754	0.0409
16	1.0153	0.0399
17	1.0543	0.0390
18	1.0924	0.0381
19	1.1298	0.0373
20	1.1664	0.0366
21	1.2023	0.0359
22	1.2375	0.0353
23	1.2722	0.0347
24	1.3063	0.0341
25	1.3399	0.0336
26	1.3730	0.0331
27	1.4056	0.0326
28	1.4377	0.0321
29	1.4694	0.0317
30	1.5007	0.0313
31	1.5316	0.0309
32	1.5621	0.0305
33	1.5923	0.0302
34	1.6221	0.0298
35	1.6516	0.0295
36	1.6808	0.0292
37	1.7097	0.0289
38	1.7382	0.0286
39	1.7665	0.0283
40	1.7945	0.0280
41	1.8223	0.0277
42	1.8497	0.0275
43	1.8770	0.0272
44	1.9040	0.0270
45	1.9308	0.0268
46	1.9573	0.0265
47	1.9836	0.0263
48	2.0097	0.0261
49	2.0357	0.0259
50	2.0614	0.0257
51	2.0869	0.0255
52	2.1122	0.0253
53	2.1374	0.0251
54	2.1623	0.0250
55	2.1871	0.0248
56	2.2117	0.0246
57	2.2362	0.0245
58	2.2605	0.0243
59	2.2846	0.0241
60	2.3086	0.0240
61	2.3324	0.0238
62	2.3561	0.0237
63	2.3796	0.0235
64	2.4030	0.0234
65	2.4263	0.0233
66	2.4494	0.0231
67	2.4724	0.0230
68	2.4953	0.0229
69	2.5180	0.0227
70	2.5406	0.0226
71	2.5631	0.0225
72	2.5855	0.0224
73	2.6067	0.0212
74	2.6277	0.0211
75	2.6487	0.0210
76	2.6695	0.0208
77	2.6903	0.0207
78	2.7109	0.0206
79	2.7314	0.0205
80	2.7518	0.0204
81	2.7722	0.0203
82	2.7924	0.0202
83	2.8125	0.0201

84	2.8325	0.0200
85	2.8524	0.0199
86	2.8722	0.0198
87	2.8919	0.0197
88	2.9116	0.0196
89	2.9311	0.0195
90	2.9505	0.0194
91	2.9699	0.0194
92	2.9892	0.0193
93	3.0084	0.0192
94	3.0275	0.0191
95	3.0465	0.0190
96	3.0654	0.0189
97	3.0843	0.0189
98	3.1031	0.0188
99	3.1218	0.0187
100	3.1404	0.0186
101	3.1590	0.0186
102	3.1774	0.0185
103	3.1958	0.0184
104	3.2142	0.0183
105	3.2324	0.0183
106	3.2506	0.0182
107	3.2687	0.0181
108	3.2868	0.0180
109	3.3048	0.0180
110	3.3227	0.0179
111	3.3405	0.0178
112	3.3583	0.0178
113	3.3760	0.0177
114	3.3937	0.0177
115	3.4113	0.0176
116	3.4288	0.0175
117	3.4463	0.0175
118	3.4637	0.0174
119	3.4810	0.0173
120	3.4983	0.0173
121	3.5155	0.0172
122	3.5327	0.0172
123	3.5498	0.0171
124	3.5669	0.0171
125	3.5839	0.0170
126	3.6008	0.0169
127	3.6177	0.0169
128	3.6345	0.0168
129	3.6513	0.0168
130	3.6680	0.0167
131	3.6847	0.0167
132	3.7013	0.0166
133	3.7179	0.0166
134	3.7344	0.0165
135	3.7509	0.0165
136	3.7673	0.0164
137	3.7837	0.0164
138	3.8000	0.0163
139	3.8163	0.0163
140	3.8325	0.0162
141	3.8487	0.0162
142	3.8648	0.0161
143	3.8809	0.0161
144	3.8970	0.0160
145	3.9130	0.0160
146	3.9289	0.0160
147	3.9448	0.0159
148	3.9607	0.0159
149	3.9765	0.0158
150	3.9923	0.0158
151	4.0080	0.0157
152	4.0237	0.0157
153	4.0393	0.0156
154	4.0549	0.0156

155	4.0705	0.0156
156	4.0860	0.0155
157	4.1015	0.0155
158	4.1170	0.0154
159	4.1324	0.0154
160	4.1477	0.0154
161	4.1631	0.0153
162	4.1783	0.0153
163	4.1936	0.0152
164	4.2088	0.0152
165	4.2240	0.0152
166	4.2391	0.0151
167	4.2542	0.0151
168	4.2693	0.0151
169	4.2843	0.0150
170	4.2993	0.0150
171	4.3142	0.0150
172	4.3291	0.0149
173	4.3440	0.0149
174	4.3589	0.0148
175	4.3737	0.0148
176	4.3885	0.0148
177	4.4032	0.0147
178	4.4179	0.0147
179	4.4326	0.0147
180	4.4472	0.0146
181	4.4618	0.0146
182	4.4764	0.0146
183	4.4909	0.0145
184	4.5055	0.0145
185	4.5199	0.0145
186	4.5344	0.0144
187	4.5488	0.0144
188	4.5632	0.0144
189	4.5775	0.0144
190	4.5919	0.0143
191	4.6061	0.0143
192	4.6204	0.0143
193	4.6346	0.0142
194	4.6488	0.0142
195	4.6630	0.0142
196	4.6771	0.0141
197	4.6913	0.0141
198	4.7053	0.0141
199	4.7194	0.0141
200	4.7334	0.0140
201	4.7474	0.0140
202	4.7614	0.0140
203	4.7753	0.0139
204	4.7892	0.0139
205	4.8031	0.0139
206	4.8170	0.0139
207	4.8308	0.0138
208	4.8446	0.0138
209	4.8584	0.0138
210	4.8721	0.0137
211	4.8858	0.0137
212	4.8995	0.0137
213	4.9132	0.0137
214	4.9268	0.0136
215	4.9404	0.0136
216	4.9540	0.0136
217	4.9676	0.0136
218	4.9811	0.0135
219	4.9946	0.0135
220	5.0081	0.0135
221	5.0216	0.0135
222	5.0350	0.0134
223	5.0484	0.0134
224	5.0618	0.0134
225	5.0752	0.0134

226	5.0885	0.0133
227	5.1018	0.0133
228	5.1151	0.0133
229	5.1284	0.0133
230	5.1416	0.0132
231	5.1549	0.0132
232	5.1681	0.0132
233	5.1812	0.0132
234	5.1944	0.0132
235	5.2075	0.0131
236	5.2206	0.0131
237	5.2337	0.0131
238	5.2468	0.0131
239	5.2598	0.0130
240	5.2728	0.0130
241	5.2858	0.0130
242	5.2988	0.0130
243	5.3117	0.0129
244	5.3247	0.0129
245	5.3376	0.0129
246	5.3505	0.0129
247	5.3633	0.0129
248	5.3762	0.0128
249	5.3890	0.0128
250	5.4018	0.0128
251	5.4146	0.0128
252	5.4273	0.0128
253	5.4401	0.0127
254	5.4528	0.0127
255	5.4655	0.0127
256	5.4782	0.0127
257	5.4908	0.0127
258	5.5034	0.0126
259	5.5161	0.0126
260	5.5287	0.0126
261	5.5412	0.0126
262	5.5538	0.0126
263	5.5663	0.0125
264	5.5788	0.0125
265	5.5913	0.0125
266	5.6038	0.0125
267	5.6163	0.0125
268	5.6287	0.0124
269	5.6412	0.0124
270	5.6536	0.0124
271	5.6659	0.0124
272	5.6783	0.0124
273	5.6907	0.0123
274	5.7030	0.0123
275	5.7153	0.0123
276	5.7276	0.0123
277	5.7399	0.0123
278	5.7521	0.0123
279	5.7644	0.0122
280	5.7766	0.0122
281	5.7888	0.0122
282	5.8010	0.0122
283	5.8131	0.0122
284	5.8253	0.0122
285	5.8374	0.0121
286	5.8495	0.0121
287	5.8616	0.0121
288	5.8737	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0082	0.0039
2	0.0121	0.0082	0.0039
3	0.0121	0.0082	0.0039

4	0.0122	0.0082	0.0039
5	0.0122	0.0083	0.0039
6	0.0122	0.0083	0.0039
7	0.0122	0.0083	0.0039
8	0.0123	0.0083	0.0039
9	0.0123	0.0083	0.0040
10	0.0123	0.0084	0.0040
11	0.0123	0.0084	0.0040
12	0.0124	0.0084	0.0040
13	0.0124	0.0084	0.0040
14	0.0124	0.0084	0.0040
15	0.0125	0.0085	0.0040
16	0.0125	0.0085	0.0040
17	0.0125	0.0085	0.0040
18	0.0125	0.0085	0.0040
19	0.0126	0.0085	0.0040
20	0.0126	0.0085	0.0041
21	0.0126	0.0086	0.0041
22	0.0127	0.0086	0.0041
23	0.0127	0.0086	0.0041
24	0.0127	0.0086	0.0041
25	0.0128	0.0087	0.0041
26	0.0128	0.0087	0.0041
27	0.0128	0.0087	0.0041
28	0.0128	0.0087	0.0041
29	0.0129	0.0087	0.0041
30	0.0129	0.0088	0.0041
31	0.0129	0.0088	0.0042
32	0.0130	0.0088	0.0042
33	0.0130	0.0088	0.0042
34	0.0130	0.0088	0.0042
35	0.0131	0.0089	0.0042
36	0.0131	0.0089	0.0042
37	0.0132	0.0089	0.0042
38	0.0132	0.0089	0.0042
39	0.0132	0.0090	0.0043
40	0.0132	0.0090	0.0043
41	0.0133	0.0090	0.0043
42	0.0133	0.0090	0.0043
43	0.0134	0.0091	0.0043
44	0.0134	0.0091	0.0043
45	0.0134	0.0091	0.0043
46	0.0135	0.0091	0.0043
47	0.0135	0.0092	0.0043
48	0.0135	0.0092	0.0044
49	0.0136	0.0092	0.0044
50	0.0136	0.0092	0.0044
51	0.0137	0.0093	0.0044
52	0.0137	0.0093	0.0044
53	0.0137	0.0093	0.0044
54	0.0138	0.0093	0.0044
55	0.0138	0.0094	0.0044
56	0.0139	0.0094	0.0045
57	0.0139	0.0094	0.0045
58	0.0139	0.0095	0.0045
59	0.0140	0.0095	0.0045
60	0.0140	0.0095	0.0045
61	0.0141	0.0096	0.0045
62	0.0141	0.0096	0.0045
63	0.0142	0.0096	0.0046
64	0.0142	0.0096	0.0046
65	0.0143	0.0097	0.0046
66	0.0143	0.0097	0.0046
67	0.0144	0.0097	0.0046
68	0.0144	0.0098	0.0046
69	0.0144	0.0098	0.0046
70	0.0145	0.0098	0.0047
71	0.0145	0.0099	0.0047
72	0.0146	0.0099	0.0047
73	0.0146	0.0099	0.0047
74	0.0147	0.0100	0.0047

75	0.0147	0.0100	0.0047
76	0.0148	0.0100	0.0048
77	0.0148	0.0101	0.0048
78	0.0149	0.0101	0.0048
79	0.0150	0.0101	0.0048
80	0.0150	0.0102	0.0048
81	0.0151	0.0102	0.0048
82	0.0151	0.0102	0.0049
83	0.0152	0.0103	0.0049
84	0.0152	0.0103	0.0049
85	0.0153	0.0104	0.0049
86	0.0153	0.0104	0.0049
87	0.0154	0.0105	0.0050
88	0.0154	0.0105	0.0050
89	0.0155	0.0105	0.0050
90	0.0156	0.0106	0.0050
91	0.0156	0.0106	0.0050
92	0.0157	0.0106	0.0050
93	0.0158	0.0107	0.0051
94	0.0158	0.0107	0.0051
95	0.0159	0.0108	0.0051
96	0.0160	0.0108	0.0051
97	0.0160	0.0109	0.0052
98	0.0161	0.0109	0.0052
99	0.0162	0.0110	0.0052
100	0.0162	0.0110	0.0052
101	0.0163	0.0111	0.0052
102	0.0164	0.0111	0.0053
103	0.0165	0.0112	0.0053
104	0.0165	0.0112	0.0053
105	0.0166	0.0113	0.0053
106	0.0167	0.0113	0.0054
107	0.0168	0.0114	0.0054
108	0.0168	0.0114	0.0054
109	0.0169	0.0115	0.0054
110	0.0170	0.0115	0.0055
111	0.0171	0.0116	0.0055
112	0.0172	0.0116	0.0055
113	0.0173	0.0117	0.0056
114	0.0173	0.0118	0.0056
115	0.0175	0.0118	0.0056
116	0.0175	0.0119	0.0056
117	0.0177	0.0120	0.0057
118	0.0177	0.0120	0.0057
119	0.0178	0.0121	0.0057
120	0.0179	0.0122	0.0058
121	0.0180	0.0122	0.0058
122	0.0181	0.0123	0.0058
123	0.0183	0.0124	0.0059
124	0.0183	0.0124	0.0059
125	0.0185	0.0125	0.0059
126	0.0186	0.0126	0.0060
127	0.0187	0.0127	0.0060
128	0.0188	0.0127	0.0060
129	0.0189	0.0129	0.0061
130	0.0190	0.0129	0.0061
131	0.0192	0.0130	0.0062
132	0.0193	0.0131	0.0062
133	0.0194	0.0132	0.0063
134	0.0195	0.0133	0.0063
135	0.0197	0.0134	0.0063
136	0.0198	0.0134	0.0064
137	0.0200	0.0136	0.0064
138	0.0201	0.0136	0.0065
139	0.0203	0.0138	0.0065
140	0.0204	0.0138	0.0066
141	0.0206	0.0140	0.0066
142	0.0207	0.0141	0.0067
143	0.0210	0.0142	0.0067
144	0.0211	0.0143	0.0068
145	0.0224	0.0152	0.0072

146	0.0225	0.0153	0.0072
147	0.0227	0.0154	0.0073
148	0.0229	0.0155	0.0074
149	0.0231	0.0157	0.0074
150	0.0233	0.0158	0.0075
151	0.0235	0.0160	0.0076
152	0.0237	0.0161	0.0076
153	0.0240	0.0163	0.0077
154	0.0241	0.0164	0.0078
155	0.0245	0.0166	0.0079
156	0.0246	0.0167	0.0079
157	0.0250	0.0169	0.0080
158	0.0251	0.0171	0.0081
159	0.0255	0.0173	0.0082
160	0.0257	0.0174	0.0083
161	0.0261	0.0177	0.0084
162	0.0263	0.0179	0.0085
163	0.0268	0.0182	0.0086
164	0.0270	0.0183	0.0087
165	0.0275	0.0186	0.0088
166	0.0277	0.0188	0.0089
167	0.0283	0.0192	0.0091
168	0.0286	0.0194	0.0092
169	0.0292	0.0198	0.0094
170	0.0295	0.0200	0.0095
171	0.0302	0.0205	0.0097
172	0.0305	0.0207	0.0098
173	0.0313	0.0212	0.0101
174	0.0317	0.0215	0.0102
175	0.0326	0.0221	0.0105
176	0.0331	0.0224	0.0106
177	0.0341	0.0231	0.0110
178	0.0347	0.0235	0.0111
179	0.0359	0.0244	0.0115
180	0.0366	0.0248	0.0118
181	0.0381	0.0259	0.0123
182	0.0390	0.0265	0.0125
183	0.0409	0.0278	0.0132
184	0.0421	0.0285	0.0135
185	0.0219	0.0148	0.0070
186	0.0233	0.0158	0.0075
187	0.0270	0.0183	0.0087
188	0.0295	0.0200	0.0095
189	0.0367	0.0249	0.0118
190	0.0423	0.0287	0.0136
191	0.0642	0.0435	0.0206
192	0.0931	0.0559	0.0372
193	0.4029	0.0559	0.3469
194	0.0505	0.0343	0.0162
195	0.0326	0.0221	0.0105
196	0.0250	0.0170	0.0080
197	0.0433	0.0294	0.0139
198	0.0399	0.0271	0.0128
199	0.0373	0.0253	0.0120
200	0.0353	0.0239	0.0113
201	0.0336	0.0228	0.0108
202	0.0321	0.0218	0.0103
203	0.0309	0.0210	0.0099
204	0.0298	0.0202	0.0096
205	0.0289	0.0196	0.0093
206	0.0280	0.0190	0.0090
207	0.0272	0.0185	0.0088
208	0.0265	0.0180	0.0085
209	0.0259	0.0176	0.0083
210	0.0253	0.0172	0.0081
211	0.0248	0.0168	0.0080
212	0.0243	0.0165	0.0078
213	0.0238	0.0162	0.0077
214	0.0234	0.0159	0.0075
215	0.0230	0.0156	0.0074
216	0.0226	0.0153	0.0073

217	0.0212	0.0144	0.0068
218	0.0208	0.0141	0.0067
219	0.0205	0.0139	0.0066
220	0.0202	0.0137	0.0065
221	0.0199	0.0135	0.0064
222	0.0196	0.0133	0.0063
223	0.0194	0.0131	0.0062
224	0.0191	0.0130	0.0061
225	0.0189	0.0128	0.0061
226	0.0186	0.0126	0.0060
227	0.0184	0.0125	0.0059
228	0.0182	0.0123	0.0058
229	0.0180	0.0122	0.0058
230	0.0178	0.0121	0.0057
231	0.0176	0.0119	0.0057
232	0.0174	0.0118	0.0056
233	0.0172	0.0117	0.0055
234	0.0171	0.0116	0.0055
235	0.0169	0.0115	0.0054
236	0.0167	0.0113	0.0054
237	0.0166	0.0112	0.0053
238	0.0164	0.0111	0.0053
239	0.0163	0.0110	0.0052
240	0.0161	0.0109	0.0052
241	0.0160	0.0109	0.0051
242	0.0159	0.0108	0.0051
243	0.0157	0.0107	0.0051
244	0.0156	0.0106	0.0050
245	0.0155	0.0105	0.0050
246	0.0154	0.0104	0.0049
247	0.0152	0.0103	0.0049
248	0.0151	0.0103	0.0049
249	0.0150	0.0102	0.0048
250	0.0149	0.0101	0.0048
251	0.0148	0.0100	0.0048
252	0.0147	0.0100	0.0047
253	0.0146	0.0099	0.0047
254	0.0145	0.0098	0.0047
255	0.0144	0.0098	0.0046
256	0.0143	0.0097	0.0046
257	0.0142	0.0097	0.0046
258	0.0141	0.0096	0.0045
259	0.0141	0.0095	0.0045
260	0.0140	0.0095	0.0045
261	0.0139	0.0094	0.0045
262	0.0138	0.0094	0.0044
263	0.0137	0.0093	0.0044
264	0.0136	0.0093	0.0044
265	0.0136	0.0092	0.0044
266	0.0135	0.0092	0.0043
267	0.0134	0.0091	0.0043
268	0.0133	0.0091	0.0043
269	0.0133	0.0090	0.0043
270	0.0132	0.0090	0.0042
271	0.0131	0.0089	0.0042
272	0.0131	0.0089	0.0042
273	0.0130	0.0088	0.0042
274	0.0129	0.0088	0.0042
275	0.0129	0.0087	0.0041
276	0.0128	0.0087	0.0041
277	0.0127	0.0086	0.0041
278	0.0127	0.0086	0.0041
279	0.0126	0.0086	0.0041
280	0.0126	0.0085	0.0040
281	0.0125	0.0085	0.0040
282	0.0124	0.0084	0.0040
283	0.0124	0.0084	0.0040
284	0.0123	0.0084	0.0040
285	0.0123	0.0083	0.0039
286	0.0122	0.0083	0.0039
287	0.0122	0.0083	0.0039

```
      288             0.0121          0.0082             0.0039
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      3.76(In)
      Total effective rainfall =      2.11(In)
      Peak flow rate in flood hydrograph =     20.13(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0002      0.02  Q          |          |          |          |
  0+10       0.0012      0.15  Q          |          |          |          |
  0+15       0.0036      0.35  Q          |          |          |          |
  0+20       0.0066      0.43  Q          |          |          |          |
  0+25       0.0099      0.48  Q          |          |          |          |
  0+30       0.0133      0.51  Q          |          |          |          |
  0+35       0.0170      0.53  Q          |          |          |          |
  0+40       0.0207      0.54  Q          |          |          |          |
  0+45       0.0244      0.54  Q          |          |          |          |
  0+50       0.0282      0.55  Q          |          |          |          |
  0+55       0.0320      0.55  Q          |          |          |          |
  1+ 0       0.0358      0.55  Q          |          |          |          |
  1+ 5       0.0396      0.56  Q          |          |          |          |
  1+10       0.0434      0.56  Q          |          |          |          |
  1+15       0.0473      0.56  Q          |          |          |          |
  1+20       0.0511      0.56  QV         |          |          |          |
  1+25       0.0550      0.56  QV         |          |          |          |
  1+30       0.0589      0.56  QV         |          |          |          |
  1+35       0.0628      0.56  QV         |          |          |          |
  1+40       0.0667      0.57  QV         |          |          |          |
  1+45       0.0706      0.57  QV         |          |          |          |
  1+50       0.0745      0.57  QV         |          |          |          |
  1+55       0.0784      0.57  QV         |          |          |          |
  2+ 0       0.0823      0.57  QV         |          |          |          |
  2+ 5       0.0863      0.57  QV         |          |          |          |
  2+10       0.0902      0.57  QV         |          |          |          |
  2+15       0.0942      0.58  QV         |          |          |          |
  2+20       0.0982      0.58  QV         |          |          |          |
  2+25       0.1021      0.58  QV         |          |          |          |
  2+30       0.1061      0.58  Q V        |          |          |          |
  2+35       0.1101      0.58  Q V        |          |          |          |
  2+40       0.1141      0.58  Q V        |          |          |          |
  2+45       0.1182      0.58  Q V        |          |          |          |
  2+50       0.1222      0.59  Q V        |          |          |          |
  2+55       0.1262      0.59  Q V        |          |          |          |
  3+ 0       0.1303      0.59  Q V        |          |          |          |
  3+ 5       0.1343      0.59  Q V        |          |          |          |
  3+10       0.1384      0.59  Q V        |          |          |          |
  3+15       0.1425      0.59  Q V        |          |          |          |
  3+20       0.1466      0.59  Q V        |          |          |          |
  3+25       0.1507      0.60  Q V        |          |          |          |
  3+30       0.1548      0.60  Q  V       |          |          |          |
  3+35       0.1589      0.60  Q  V       |          |          |          |
  3+40       0.1631      0.60  Q  V       |          |          |          |
  3+45       0.1672      0.60  Q  V       |          |          |          |
  3+50       0.1714      0.60  Q  V       |          |          |          |
  3+55       0.1755      0.61  Q  V       |          |          |          |
  4+ 0       0.1797      0.61  Q  V       |          |          |          |
  4+ 5       0.1839      0.61  Q  V       |          |          |          |
  4+10       0.1881      0.61  Q  V       |          |          |          |
  4+15       0.1923      0.61  Q  V       |          |          |          |
  4+20       0.1966      0.61  Q  V       |          |          |          |
  4+25       0.2008      0.62  Q  V       |          |          |          |
  4+30       0.2051      0.62  Q   V      |          |          |          |
  4+35       0.2093      0.62  Q   V      |          |          |          |
```

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 4+40      0.2136      0.62  Q   V     |         |         |         |
 4+45      0.2179      0.62  Q   V     |         |         |         |
 4+50      0.2222      0.62  Q   V     |         |         |         |
 4+55      0.2265      0.63  Q   V     |         |         |         |
 5+ 0      0.2308      0.63  Q   V     |         |         |         |
 5+ 5      0.2352      0.63  Q   V     |         |         |         |
 5+10      0.2395      0.63  Q   V     |         |         |         |
 5+15      0.2439      0.63  Q   V     |         |         |         |
 5+20      0.2483      0.64  Q   V     |         |         |         |
 5+25      0.2527      0.64  Q   V     |         |         |         |
 5+30      0.2571      0.64  Q    V    |         |         |         |
 5+35      0.2615      0.64  Q    V    |         |         |         |
 5+40      0.2659      0.64  Q    V    |         |         |         |
 5+45      0.2704      0.65  Q    V    |         |         |         |
 5+50      0.2749      0.65  Q    V    |         |         |         |
 5+55      0.2793      0.65  Q    V    |         |         |         |
 6+ 0      0.2838      0.65  Q    V    |         |         |         |
 6+ 5      0.2884      0.66  Q    V    |         |         |         |
 6+10      0.2929      0.66  Q    V    |         |         |         |
 6+15      0.2974      0.66  Q    V    |         |         |         |
 6+20      0.3020      0.66  Q    V    |         |         |         |
 6+25      0.3065      0.66  Q     V   |         |         |         |
 6+30      0.3111      0.67  Q     V   |         |         |         |
 6+35      0.3157      0.67  Q     V   |         |         |         |
 6+40      0.3204      0.67  Q     V   |         |         |         |
 6+45      0.3250      0.67  Q     V   |         |         |         |
 6+50      0.3297      0.68  Q     V   |         |         |         |
 6+55      0.3343      0.68  Q     V   |         |         |         |
 7+ 0      0.3390      0.68  Q     V   |         |         |         |
 7+ 5      0.3437      0.68  Q     V   |         |         |         |
 7+10      0.3484      0.69  Q     V   |         |         |         |
 7+15      0.3532      0.69  Q     V   |         |         |         |
 7+20      0.3579      0.69  Q      V  |         |         |         |
 7+25      0.3627      0.69  Q      V  |         |         |         |
 7+30      0.3675      0.70  Q      V  |         |         |         |
 7+35      0.3723      0.70  Q      V  |         |         |         |
 7+40      0.3772      0.70  Q      V  |         |         |         |
 7+45      0.3820      0.70  Q      V  |         |         |         |
 7+50      0.3869      0.71  Q      V  |         |         |         |
 7+55      0.3918      0.71  Q      V  |         |         |         |
 8+ 0      0.3967      0.71  Q      V  |         |         |         |
 8+ 5      0.4016      0.72  Q      V  |         |         |         |
 8+10      0.4066      0.72  Q      V  |         |         |         |
 8+15      0.4115      0.72  Q       V |         |         |         |
 8+20      0.4165      0.73  Q       V |         |         |         |
 8+25      0.4215      0.73  Q       V |         |         |         |
 8+30      0.4266      0.73  Q       V |         |         |         |
 8+35      0.4316      0.73  Q       V |         |         |         |
 8+40      0.4367      0.74  Q       V |         |         |         |
 8+45      0.4418      0.74  Q       V |         |         |         |
 8+50      0.4470      0.74  Q       V |         |         |         |
 8+55      0.4521      0.75  Q       V |         |         |         |
 9+ 0      0.4573      0.75  |Q      V |         |         |         |
 9+ 5      0.4625      0.76  |Q       V|         |         |         |
 9+10      0.4677      0.76  |Q       V|         |         |         |
 9+15      0.4730      0.76  |Q       V|         |         |         |
 9+20      0.4782      0.77  |Q       V|         |         |         |
 9+25      0.4835      0.77  |Q       V|         |         |         |
 9+30      0.4889      0.77  |Q       V|         |         |         |
 9+35      0.4942      0.78  |Q       V|         |         |         |
 9+40      0.4996      0.78  |Q       V|         |         |         |
 9+45      0.5050      0.79  |Q       V|         |         |         |
 9+50      0.5104      0.79  |Q       V|         |         |         |
 9+55      0.5159      0.79  |Q        V         |         |         |
10+ 0      0.5214      0.80  |Q        V         |         |         |
10+ 5      0.5269      0.80  |Q        V         |         |         |
10+10      0.5325      0.81  |Q        V         |         |         |
10+15      0.5381      0.81  |Q        V         |         |         |
10+20      0.5437      0.82  |Q        V         |         |         |
10+25      0.5494      0.82  |Q        V         |         |         |
10+30      0.5551      0.83  |Q        V         |         |         |
```

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10+35       0.5608      0.83  |Q        V         |          |          |
10+40       0.5665      0.84  |Q        |V        |          |          |
10+45       0.5723      0.84  |Q        |V        |          |          |
10+50       0.5781      0.85  |Q        |V        |          |          |
10+55       0.5840      0.85  |Q        |V        |          |          |
11+ 0       0.5899      0.86  |Q        |V        |          |          |
11+ 5       0.5958      0.86  |Q        |V        |          |          |
11+10       0.6018      0.87  |Q        |V        |          |          |
11+15       0.6078      0.87  |Q        |V        |          |          |
11+20       0.6139      0.88  |Q        | V       |          |          |
11+25       0.6200      0.89  |Q        | V       |          |          |
11+30       0.6262      0.89  |Q        | V       |          |          |
11+35       0.6323      0.90  |Q        | V       |          |          |
11+40       0.6386      0.91  |Q        | V       |          |          |
11+45       0.6449      0.91  |Q        | V       |          |          |
11+50       0.6512      0.92  |Q        | V       |          |          |
11+55       0.6576      0.93  |Q        | V       |          |          |
12+ 0       0.6640      0.93  |Q        | V       |          |          |
12+ 5       0.6705      0.94  |Q        |  V      |          |          |
12+10       0.6771      0.96  |Q        |  V      |          |          |
12+15       0.6839      0.99  |Q        |  V      |          |          |
12+20       0.6908      1.00  |Q        |  V      |          |          |
12+25       0.6978      1.01  |Q        |  V      |          |          |
12+30       0.7049      1.03  |Q        |  V      |          |          |
12+35       0.7120      1.04  |Q        |  V      |          |          |
12+40       0.7192      1.05  |Q        |   V     |          |          |
12+45       0.7265      1.06  |Q        |   V     |          |          |
12+50       0.7338      1.07  |Q        |   V     |          |          |
12+55       0.7412      1.08  |Q        |   V     |          |          |
13+ 0       0.7487      1.09  |Q        |   V     |          |          |
13+ 5       0.7562      1.10  |Q        |   V     |          |          |
13+10       0.7639      1.11  |Q        |   V     |          |          |
13+15       0.7716      1.12  |Q        |    V    |          |          |
13+20       0.7794      1.13  |Q        |    V    |          |          |
13+25       0.7872      1.14  |Q        |    V    |          |          |
13+30       0.7952      1.16  |Q        |    V    |          |          |
13+35       0.8033      1.17  |Q        |    V    |          |          |
13+40       0.8114      1.18  |Q        |    V    |          |          |
13+45       0.8197      1.20  |Q        |     V   |          |          |
13+50       0.8280      1.21  |Q        |     V   |          |          |
13+55       0.8365      1.23  |Q        |     V   |          |          |
14+ 0       0.8451      1.25  |Q        |     V   |          |          |
14+ 5       0.8538      1.27  |Q        |     V   |          |          |
14+10       0.8626      1.28  |Q        |     V   |          |          |
14+15       0.8716      1.30  |Q        |      V  |          |          |
14+20       0.8807      1.32  |Q        |      V  |          |          |
14+25       0.8900      1.35  |Q        |      V  |          |          |
14+30       0.8995      1.37  |Q        |      V  |          |          |
14+35       0.9091      1.40  |Q        |      V  |          |          |
14+40       0.9189      1.42  |Q        |      V  |          |          |
14+45       0.9289      1.45  |Q        |       V |          |          |
14+50       0.9391      1.48  |Q        |       V |          |          |
14+55       0.9496      1.52  | Q       |       V |          |          |
15+ 0       0.9603      1.55  | Q       |       V |          |          |
15+ 5       0.9713      1.60  | Q       |        V|          |          |
15+10       0.9826      1.64  | Q       |        V|          |          |
15+15       0.9942      1.69  | Q       |        V|          |          |
15+20       1.0062      1.75  | Q       |        V|          |          |
15+25       1.0184      1.77  | Q       |        V|          |          |
15+30       1.0295      1.60  | Q       |         V          |          |
15+35       1.0384      1.30  |Q        |         V          |          |
15+40       1.0471      1.25  |Q        |         V          |          |
15+45       1.0560      1.30  |Q        |         V          |          |
15+50       1.0658      1.41  |Q        |         V          |          |
15+55       1.0771      1.64  | Q       |         |V         |          |
16+ 0       1.0916      2.11  | Q       |         |V         |          |
16+ 5       1.1263      5.04  |     Q   |         | V        |          |
16+10       1.2213     13.79  |         |       Q |  V       |          |
16+15       1.3599     20.13  |         |         |     Q    |          |
16+20       1.4206      8.81  |         |Q        |      V   |          |
16+25       1.4593      5.62  |      Q  |         |       V  |          |
```

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16+30       1.4880      4.17  |    Q    |         |        V|         |
16+35       1.5115      3.41  |   Q     |         |        V|         |
16+40       1.5301      2.70  |  Q      |         |        V|         |
16+45       1.5445      2.09  | Q       |         |         V         |
16+50       1.5574      1.87  | Q       |         |         V         |
16+55       1.5693      1.73  | Q       |         |         V         |
17+ 0       1.5809      1.68  | Q       |         |         V         |
17+ 5       1.5915      1.55  | Q       |         |         |V        |
17+10       1.6014      1.44  |Q        |         |         |V        |
17+15       1.6106      1.33  |Q        |         |         |V        |
17+20       1.6195      1.29  |Q        |         |         |V        |
17+25       1.6282      1.26  |Q        |         |         |V        |
17+30       1.6366      1.22  |Q        |         |         | V       |
17+35       1.6448      1.19  |Q        |         |         | V       |
17+40       1.6528      1.16  |Q        |         |         | V       |
17+45       1.6606      1.14  |Q        |         |         | V       |
17+50       1.6683      1.11  |Q        |         |         | V       |
17+55       1.6758      1.09  |Q        |         |         | V       |
18+ 0       1.6832      1.07  |Q        |         |         | V       |
18+ 5       1.6904      1.05  |Q        |         |         |  V      |
18+10       1.6974      1.02  |Q        |         |         |  V      |
18+15       1.7042      0.98  |Q        |         |         |  V      |
18+20       1.7108      0.96  |Q        |         |         |  V      |
18+25       1.7173      0.94  |Q        |         |         |  V      |
18+30       1.7237      0.93  |Q        |         |         |  V      |
18+35       1.7300      0.91  |Q        |         |         |  V      |
18+40       1.7361      0.90  |Q        |         |         |  V      |
18+45       1.7422      0.88  |Q        |         |         |   V     |
18+50       1.7482      0.87  |Q        |         |         |   V     |
18+55       1.7541      0.86  |Q        |         |         |   V     |
19+ 0       1.7600      0.85  |Q        |         |         |   V     |
19+ 5       1.7657      0.84  |Q        |         |         |   V     |
19+10       1.7714      0.83  |Q        |         |         |   V     |
19+15       1.7771      0.82  |Q        |         |         |   V     |
19+20       1.7826      0.81  |Q        |         |         |   V     |
19+25       1.7881      0.80  |Q        |         |         |    V    |
19+30       1.7936      0.79  |Q        |         |         |    V    |
19+35       1.7990      0.78  |Q        |         |         |    V    |
19+40       1.8043      0.77  |Q        |         |         |    V    |
19+45       1.8096      0.77  |Q        |         |         |    V    |
19+50       1.8148      0.76  |Q        |         |         |    V    |
19+55       1.8200      0.75  |Q        |         |         |    V    |
20+ 0       1.8251      0.75  Q         |         |         |    V    |
20+ 5       1.8302      0.74  Q         |         |         |    V    |
20+10       1.8353      0.73  Q         |         |         |    V    |
20+15       1.8403      0.73  Q         |         |         |     V   |
20+20       1.8452      0.72  Q         |         |         |     V   |
20+25       1.8501      0.71  Q         |         |         |     V   |
20+30       1.8550      0.71  Q         |         |         |     V   |
20+35       1.8599      0.70  Q         |         |         |     V   |
20+40       1.8647      0.70  Q         |         |         |     V   |
20+45       1.8694      0.69  Q         |         |         |     V   |
20+50       1.8742      0.69  Q         |         |         |     V   |
20+55       1.8788      0.68  Q         |         |         |     V   |
21+ 0       1.8835      0.68  Q         |         |         |     V   |
21+ 5       1.8881      0.67  Q         |         |         |     V   |
21+10       1.8927      0.67  Q         |         |         |      V  |
21+15       1.8973      0.66  Q         |         |         |      V  |
21+20       1.9018      0.66  Q         |         |         |      V  |
21+25       1.9063      0.65  Q         |         |         |      V  |
21+30       1.9108      0.65  Q         |         |         |      V  |
21+35       1.9152      0.64  Q         |         |         |      V  |
21+40       1.9196      0.64  Q         |         |         |      V  |
21+45       1.9240      0.64  Q         |         |         |      V  |
21+50       1.9284      0.63  Q         |         |         |      V  |
21+55       1.9327      0.63  Q         |         |         |      V  |
22+ 0       1.9370      0.63  Q         |         |         |      V  |
22+ 5       1.9413      0.62  Q         |         |         |       V |
22+10       1.9456      0.62  Q         |         |         |       V |
22+15       1.9498      0.61  Q         |         |         |       V |
22+20       1.9540      0.61  Q         |         |         |       V |
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   22+25       1.9582      0.61  Q          |          |          |       V |
   22+30       1.9623      0.60  Q          |          |          |       V |
   22+35       1.9665      0.60  Q          |          |          |       V |
   22+40       1.9706      0.60  Q          |          |          |       V |
   22+45       1.9747      0.59  Q          |          |          |       V |
   22+50       1.9788      0.59  Q          |          |          |       V |
   22+55       1.9828      0.59  Q          |          |          |       V |
   23+ 0       1.9868      0.59  Q          |          |          |       V |
   23+ 5       1.9909      0.58  Q          |          |          |       V |
   23+10       1.9948      0.58  Q          |          |          |        V|
   23+15       1.9988      0.58  Q          |          |          |        V|
   23+20       2.0028      0.57  Q          |          |          |        V|
   23+25       2.0067      0.57  Q          |          |          |        V|
   23+30       2.0106      0.57  Q          |          |          |        V|
   23+35       2.0145      0.57  Q          |          |          |        V|
   23+40       2.0184      0.56  Q          |          |          |        V|
   23+45       2.0223      0.56  Q          |          |          |        V|
   23+50       2.0261      0.56  Q          |          |          |        V|
   23+55       2.0299      0.56  Q          |          |          |        V|
   24+ 0       2.0337      0.55  Q          |          |          |        V|
   24+ 5       2.0374      0.53  Q          |          |          |        V|
   24+10       2.0401      0.40  Q          |          |          |        V|
   24+15       2.0415      0.19  Q          |          |          |        V|
   24+20       2.0423      0.12  Q          |          |          |        V|
   24+25       2.0428      0.07  Q          |          |          |        V|
   24+30       2.0431      0.04  Q          |          |          |        V|
   24+35       2.0432      0.02  Q          |          |          |        V|
   24+40       2.0433      0.01  Q          |          |          |        V|
   24+45       2.0434      0.01  Q          |          |          |        V|
   24+50       2.0434      0.01  Q          |          |          |        V|
   24+55       2.0435      0.00  Q          |          |          |        V|
   25+ 0       2.0435      0.00  Q          |          |          |        V|
   25+ 5       2.0435      0.00  Q          |          |          |        V|
-------------------------------------------------------------------------
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Area 'B' – 10 Year 24 Hour - Proposed Condition – Unit Hydrograph

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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

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                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

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TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
10 YEAR 24 HOUR STORM
DECEMBER 16, 2024
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        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            11.61            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61           24          12.00
------------------------------------------------------------------------
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******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      78.0         11.61      1.000     0.404    1.000    0.404

Area-averaged adjusted loss rate Fm (In/Hr) =  0.404

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
11.61	1.000	78.0	78.0	2.82	0.650

Area-averaged catchment yield fraction, Y = 0.650
Area-averaged low loss fraction, Yb = 0.350
User entry of time of concentration = 0.196 (hours)
++
Watershed area = 11.61(Ac.)
Catchment Lag time = 0.157 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 53.1924
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.404(In/Hr)
Average low loss rate fraction (Yb) = 0.350 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 11.61(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.474(In)
30-minute factor = 0.999 Adjusted rainfall = 0.812(In)
1-hour factor = 0.999 Adjusted rainfall = 0.999(In)
3-hour factor = 1.000 Adjusted rainfall = 1.973(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 140.41 (CFS))	
1	4.677	6.567
2	28.694	33.722
3	65.919	52.267
4	79.678	19.320
5	87.633	11.169
6	92.737	7.167
7	95.953	4.516
8	97.772	2.553
9	98.510	1.037
10	99.015	0.709
11	99.374	0.505
12	99.739	0.511
13	99.927	0.265
14	100.000	0.102

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4743	0.4743
2	0.5839	0.1096
3	0.6594	0.0755
4	0.7188	0.0594
5	0.7686	0.0498
6	0.8118	0.0432
7	0.8502	0.0384
8	0.8850	0.0348
9	0.9168	0.0318
10	0.9463	0.0294
11	0.9737	0.0274
12	0.9995	0.0258

13	1.0502	0.0508
14	1.0995	0.0493
15	1.1475	0.0480
16	1.1942	0.0468
17	1.2399	0.0457
18	1.2845	0.0446
19	1.3282	0.0437
20	1.3711	0.0428
21	1.4131	0.0420
22	1.4544	0.0413
23	1.4949	0.0406
24	1.5348	0.0399
25	1.5741	0.0393
26	1.6128	0.0387
27	1.6509	0.0381
28	1.6885	0.0376
29	1.7255	0.0371
30	1.7621	0.0366
31	1.7982	0.0361
32	1.8339	0.0357
33	1.8692	0.0353
34	1.9040	0.0349
35	1.9385	0.0345
36	1.9726	0.0341
37	2.0063	0.0337
38	2.0397	0.0334
39	2.0727	0.0330
40	2.1054	0.0327
41	2.1378	0.0324
42	2.1699	0.0321
43	2.2017	0.0318
44	2.2332	0.0315
45	2.2645	0.0313
46	2.2955	0.0310
47	2.3262	0.0307
48	2.3567	0.0305
49	2.3870	0.0302
50	2.4170	0.0300
51	2.4468	0.0298
52	2.4763	0.0296
53	2.5057	0.0293
54	2.5348	0.0291
55	2.5637	0.0289
56	2.5925	0.0287
57	2.6210	0.0285
58	2.6493	0.0283
59	2.6775	0.0282
60	2.7055	0.0280
61	2.7333	0.0278
62	2.7609	0.0276
63	2.7884	0.0275
64	2.8156	0.0273
65	2.8428	0.0271
66	2.8697	0.0270
67	2.8966	0.0268
68	2.9232	0.0267
69	2.9497	0.0265
70	2.9761	0.0264
71	3.0023	0.0262
72	3.0284	0.0261
73	3.0550	0.0266
74	3.0815	0.0265
75	3.1078	0.0263
76	3.1340	0.0262
77	3.1601	0.0261
78	3.1860	0.0259
79	3.2118	0.0258
80	3.2375	0.0257
81	3.2631	0.0256
82	3.2886	0.0255
83	3.3140	0.0254

84	3.3392	0.0253
85	3.3644	0.0251
86	3.3894	0.0250
87	3.4143	0.0249
88	3.4391	0.0248
89	3.4639	0.0247
90	3.4885	0.0246
91	3.5130	0.0245
92	3.5374	0.0244
93	3.5617	0.0243
94	3.5860	0.0242
95	3.6101	0.0241
96	3.6341	0.0240
97	3.6581	0.0239
98	3.6819	0.0239
99	3.7057	0.0238
100	3.7294	0.0237
101	3.7530	0.0236
102	3.7765	0.0235
103	3.7999	0.0234
104	3.8232	0.0233
105	3.8465	0.0233
106	3.8697	0.0232
107	3.8928	0.0231
108	3.9158	0.0230
109	3.9387	0.0229
110	3.9616	0.0229
111	3.9844	0.0228
112	4.0071	0.0227
113	4.0297	0.0226
114	4.0523	0.0226
115	4.0748	0.0225
116	4.0972	0.0224
117	4.1196	0.0224
118	4.1419	0.0223
119	4.1641	0.0222
120	4.1862	0.0221
121	4.2083	0.0221
122	4.2303	0.0220
123	4.2522	0.0219
124	4.2741	0.0219
125	4.2959	0.0218
126	4.3177	0.0218
127	4.3394	0.0217
128	4.3610	0.0216
129	4.3826	0.0216
130	4.4041	0.0215
131	4.4255	0.0214
132	4.4469	0.0214
133	4.4682	0.0213
134	4.4895	0.0213
135	4.5107	0.0212
136	4.5318	0.0211
137	4.5529	0.0211
138	4.5739	0.0210
139	4.5949	0.0210
140	4.6158	0.0209
141	4.6367	0.0209
142	4.6575	0.0208
143	4.6783	0.0208
144	4.6990	0.0207
145	4.7197	0.0207
146	4.7403	0.0206
147	4.7608	0.0206
148	4.7813	0.0205
149	4.8018	0.0205
150	4.8222	0.0204
151	4.8425	0.0204
152	4.8628	0.0203
153	4.8831	0.0203
154	4.9033	0.0202

155	4.9234	0.0202
156	4.9435	0.0201
157	4.9636	0.0201
158	4.9836	0.0200
159	5.0036	0.0200
160	5.0235	0.0199
161	5.0434	0.0199
162	5.0632	0.0198
163	5.0830	0.0198
164	5.1027	0.0197
165	5.1224	0.0197
166	5.1421	0.0197
167	5.1617	0.0196
168	5.1813	0.0196
169	5.2008	0.0195
170	5.2203	0.0195
171	5.2397	0.0194
172	5.2591	0.0194
173	5.2785	0.0194
174	5.2978	0.0193
175	5.3171	0.0193
176	5.3363	0.0192
177	5.3555	0.0192
178	5.3747	0.0192
179	5.3938	0.0191
180	5.4129	0.0191
181	5.4319	0.0190
182	5.4509	0.0190
183	5.4699	0.0190
184	5.4888	0.0189
185	5.5077	0.0189
186	5.5265	0.0189
187	5.5453	0.0188
188	5.5641	0.0188
189	5.5829	0.0187
190	5.6016	0.0187
191	5.6202	0.0187
192	5.6389	0.0186
193	5.6575	0.0186
194	5.6760	0.0186
195	5.6945	0.0185
196	5.7130	0.0185
197	5.7315	0.0185
198	5.7499	0.0184
199	5.7683	0.0184
200	5.7867	0.0184
201	5.8050	0.0183
202	5.8233	0.0183
203	5.8415	0.0183
204	5.8597	0.0182
205	5.8779	0.0182
206	5.8961	0.0182
207	5.9142	0.0181
208	5.9323	0.0181
209	5.9504	0.0181
210	5.9684	0.0180
211	5.9864	0.0180
212	6.0044	0.0180
213	6.0223	0.0179
214	6.0402	0.0179
215	6.0581	0.0179
216	6.0759	0.0178
217	6.0937	0.0178
218	6.1115	0.0178
219	6.1293	0.0178
220	6.1470	0.0177
221	6.1647	0.0177
222	6.1823	0.0177
223	6.2000	0.0176
224	6.2176	0.0176
225	6.2352	0.0176

226	6.2527	0.0175
227	6.2702	0.0175
228	6.2877	0.0175
229	6.3052	0.0175
230	6.3226	0.0174
231	6.3400	0.0174
232	6.3574	0.0174
233	6.3748	0.0174
234	6.3921	0.0173
235	6.4094	0.0173
236	6.4267	0.0173
237	6.4439	0.0172
238	6.4611	0.0172
239	6.4783	0.0172
240	6.4955	0.0172
241	6.5126	0.0171
242	6.5297	0.0171
243	6.5468	0.0171
244	6.5639	0.0171
245	6.5809	0.0170
246	6.5979	0.0170
247	6.6149	0.0170
248	6.6319	0.0170
249	6.6488	0.0169
250	6.6657	0.0169
251	6.6826	0.0169
252	6.6995	0.0169
253	6.7163	0.0168
254	6.7331	0.0168
255	6.7499	0.0168
256	6.7667	0.0168
257	6.7834	0.0167
258	6.8001	0.0167
259	6.8168	0.0167
260	6.8335	0.0167
261	6.8502	0.0166
262	6.8668	0.0166
263	6.8834	0.0166
264	6.9000	0.0166
265	6.9165	0.0166
266	6.9330	0.0165
267	6.9495	0.0165
268	6.9660	0.0165
269	6.9825	0.0165
270	6.9989	0.0164
271	7.0154	0.0164
272	7.0318	0.0164
273	7.0481	0.0164
274	7.0645	0.0164
275	7.0808	0.0163
276	7.0971	0.0163
277	7.1134	0.0163
278	7.1297	0.0163
279	7.1459	0.0162
280	7.1621	0.0162
281	7.1783	0.0162
282	7.1945	0.0162
283	7.2107	0.0162
284	7.2268	0.0161
285	7.2429	0.0161
286	7.2590	0.0161
287	7.2751	0.0161
288	7.2912	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0056	0.0104
2	0.0161	0.0056	0.0105
3	0.0161	0.0056	0.0105

4	0.0161	0.0056	0.0105
5	0.0162	0.0057	0.0105
6	0.0162	0.0057	0.0105
7	0.0162	0.0057	0.0106
8	0.0163	0.0057	0.0106
9	0.0163	0.0057	0.0106
10	0.0163	0.0057	0.0106
11	0.0164	0.0057	0.0106
12	0.0164	0.0057	0.0107
13	0.0164	0.0058	0.0107
14	0.0165	0.0058	0.0107
15	0.0165	0.0058	0.0107
16	0.0165	0.0058	0.0107
17	0.0166	0.0058	0.0108
18	0.0166	0.0058	0.0108
19	0.0166	0.0058	0.0108
20	0.0167	0.0058	0.0108
21	0.0167	0.0058	0.0109
22	0.0167	0.0059	0.0109
23	0.0168	0.0059	0.0109
24	0.0168	0.0059	0.0109
25	0.0169	0.0059	0.0110
26	0.0169	0.0059	0.0110
27	0.0169	0.0059	0.0110
28	0.0170	0.0059	0.0110
29	0.0170	0.0060	0.0111
30	0.0170	0.0060	0.0111
31	0.0171	0.0060	0.0111
32	0.0171	0.0060	0.0111
33	0.0172	0.0060	0.0112
34	0.0172	0.0060	0.0112
35	0.0172	0.0060	0.0112
36	0.0173	0.0060	0.0112
37	0.0173	0.0061	0.0113
38	0.0174	0.0061	0.0113
39	0.0174	0.0061	0.0113
40	0.0174	0.0061	0.0113
41	0.0175	0.0061	0.0114
42	0.0175	0.0061	0.0114
43	0.0176	0.0062	0.0114
44	0.0176	0.0062	0.0114
45	0.0177	0.0062	0.0115
46	0.0177	0.0062	0.0115
47	0.0178	0.0062	0.0115
48	0.0178	0.0062	0.0116
49	0.0178	0.0062	0.0116
50	0.0179	0.0063	0.0116
51	0.0179	0.0063	0.0117
52	0.0180	0.0063	0.0117
53	0.0180	0.0063	0.0117
54	0.0181	0.0063	0.0117
55	0.0181	0.0063	0.0118
56	0.0182	0.0064	0.0118
57	0.0182	0.0064	0.0118
58	0.0183	0.0064	0.0119
59	0.0183	0.0064	0.0119
60	0.0184	0.0064	0.0119
61	0.0184	0.0064	0.0120
62	0.0185	0.0065	0.0120
63	0.0185	0.0065	0.0120
64	0.0186	0.0065	0.0121
65	0.0186	0.0065	0.0121
66	0.0187	0.0065	0.0121
67	0.0187	0.0066	0.0122
68	0.0188	0.0066	0.0122
69	0.0189	0.0066	0.0123
70	0.0189	0.0066	0.0123
71	0.0190	0.0066	0.0123
72	0.0190	0.0066	0.0124
73	0.0191	0.0067	0.0124
74	0.0191	0.0067	0.0124

75	0.0192	0.0067	0.0125
76	0.0192	0.0067	0.0125
77	0.0193	0.0068	0.0126
78	0.0194	0.0068	0.0126
79	0.0194	0.0068	0.0126
80	0.0195	0.0068	0.0127
81	0.0196	0.0068	0.0127
82	0.0196	0.0069	0.0127
83	0.0197	0.0069	0.0128
84	0.0197	0.0069	0.0128
85	0.0198	0.0069	0.0129
86	0.0199	0.0070	0.0129
87	0.0200	0.0070	0.0130
88	0.0200	0.0070	0.0130
89	0.0201	0.0070	0.0131
90	0.0202	0.0071	0.0131
91	0.0203	0.0071	0.0132
92	0.0203	0.0071	0.0132
93	0.0204	0.0071	0.0133
94	0.0205	0.0072	0.0133
95	0.0206	0.0072	0.0134
96	0.0206	0.0072	0.0134
97	0.0207	0.0072	0.0135
98	0.0208	0.0073	0.0135
99	0.0209	0.0073	0.0136
100	0.0209	0.0073	0.0136
101	0.0210	0.0074	0.0137
102	0.0211	0.0074	0.0137
103	0.0212	0.0074	0.0138
104	0.0213	0.0074	0.0138
105	0.0214	0.0075	0.0139
106	0.0214	0.0075	0.0139
107	0.0216	0.0075	0.0140
108	0.0216	0.0076	0.0141
109	0.0218	0.0076	0.0141
110	0.0218	0.0076	0.0142
111	0.0219	0.0077	0.0143
112	0.0220	0.0077	0.0143
113	0.0221	0.0077	0.0144
114	0.0222	0.0078	0.0144
115	0.0224	0.0078	0.0145
116	0.0224	0.0078	0.0146
117	0.0226	0.0079	0.0147
118	0.0226	0.0079	0.0147
119	0.0228	0.0080	0.0148
120	0.0229	0.0080	0.0149
121	0.0230	0.0081	0.0150
122	0.0231	0.0081	0.0150
123	0.0233	0.0081	0.0151
124	0.0233	0.0082	0.0152
125	0.0235	0.0082	0.0153
126	0.0236	0.0083	0.0153
127	0.0238	0.0083	0.0155
128	0.0239	0.0083	0.0155
129	0.0240	0.0084	0.0156
130	0.0241	0.0084	0.0157
131	0.0243	0.0085	0.0158
132	0.0244	0.0085	0.0159
133	0.0246	0.0086	0.0160
134	0.0247	0.0086	0.0161
135	0.0249	0.0087	0.0162
136	0.0250	0.0088	0.0163
137	0.0253	0.0088	0.0164
138	0.0254	0.0089	0.0165
139	0.0256	0.0090	0.0166
140	0.0257	0.0090	0.0167
141	0.0259	0.0091	0.0169
142	0.0261	0.0091	0.0169
143	0.0263	0.0092	0.0171
144	0.0265	0.0093	0.0172
145	0.0261	0.0091	0.0170

146	0.0262	0.0092	0.0170
147	0.0265	0.0093	0.0172
148	0.0267	0.0093	0.0173
149	0.0270	0.0094	0.0175
150	0.0271	0.0095	0.0176
151	0.0275	0.0096	0.0178
152	0.0276	0.0097	0.0180
153	0.0280	0.0098	0.0182
154	0.0282	0.0099	0.0183
155	0.0285	0.0100	0.0185
156	0.0287	0.0101	0.0187
157	0.0291	0.0102	0.0189
158	0.0293	0.0103	0.0191
159	0.0298	0.0104	0.0194
160	0.0300	0.0105	0.0195
161	0.0305	0.0107	0.0198
162	0.0307	0.0108	0.0200
163	0.0313	0.0109	0.0203
164	0.0315	0.0110	0.0205
165	0.0321	0.0112	0.0209
166	0.0324	0.0113	0.0211
167	0.0330	0.0116	0.0215
168	0.0334	0.0117	0.0217
169	0.0341	0.0119	0.0222
170	0.0345	0.0121	0.0224
171	0.0353	0.0123	0.0229
172	0.0357	0.0125	0.0232
173	0.0366	0.0128	0.0238
174	0.0371	0.0130	0.0241
175	0.0381	0.0133	0.0248
176	0.0387	0.0135	0.0251
177	0.0399	0.0140	0.0259
178	0.0406	0.0142	0.0264
179	0.0420	0.0147	0.0273
180	0.0428	0.0150	0.0278
181	0.0446	0.0156	0.0290
182	0.0457	0.0160	0.0297
183	0.0480	0.0168	0.0312
184	0.0493	0.0172	0.0320
185	0.0258	0.0090	0.0167
186	0.0274	0.0096	0.0178
187	0.0318	0.0111	0.0207
188	0.0348	0.0122	0.0226
189	0.0432	0.0151	0.0281
190	0.0498	0.0174	0.0324
191	0.0755	0.0264	0.0491
192	0.1096	0.0336	0.0760
193	0.4743	0.0336	0.4406
194	0.0594	0.0208	0.0386
195	0.0384	0.0134	0.0250
196	0.0294	0.0103	0.0191
197	0.0508	0.0178	0.0330
198	0.0468	0.0164	0.0304
199	0.0437	0.0153	0.0284
200	0.0413	0.0144	0.0268
201	0.0393	0.0137	0.0255
202	0.0376	0.0131	0.0244
203	0.0361	0.0126	0.0235
204	0.0349	0.0122	0.0227
205	0.0337	0.0118	0.0219
206	0.0327	0.0114	0.0213
207	0.0318	0.0111	0.0207
208	0.0310	0.0108	0.0201
209	0.0302	0.0106	0.0197
210	0.0296	0.0103	0.0192
211	0.0289	0.0101	0.0188
212	0.0283	0.0099	0.0184
213	0.0278	0.0097	0.0181
214	0.0273	0.0095	0.0177
215	0.0268	0.0094	0.0174
216	0.0264	0.0092	0.0171

217	0.0266	0.0093	0.0173
218	0.0262	0.0092	0.0170
219	0.0258	0.0090	0.0168
220	0.0255	0.0089	0.0166
221	0.0251	0.0088	0.0163
222	0.0248	0.0087	0.0161
223	0.0245	0.0086	0.0159
224	0.0242	0.0085	0.0157
225	0.0239	0.0084	0.0156
226	0.0237	0.0083	0.0154
227	0.0234	0.0082	0.0152
228	0.0232	0.0081	0.0151
229	0.0229	0.0080	0.0149
230	0.0227	0.0079	0.0148
231	0.0225	0.0079	0.0146
232	0.0223	0.0078	0.0145
233	0.0221	0.0077	0.0144
234	0.0219	0.0077	0.0142
235	0.0217	0.0076	0.0141
236	0.0215	0.0075	0.0140
237	0.0213	0.0075	0.0139
238	0.0211	0.0074	0.0137
239	0.0210	0.0073	0.0136
240	0.0208	0.0073	0.0135
241	0.0207	0.0072	0.0134
242	0.0205	0.0072	0.0133
243	0.0204	0.0071	0.0132
244	0.0202	0.0071	0.0131
245	0.0201	0.0070	0.0130
246	0.0199	0.0070	0.0130
247	0.0198	0.0069	0.0129
248	0.0197	0.0069	0.0128
249	0.0195	0.0068	0.0127
250	0.0194	0.0068	0.0126
251	0.0193	0.0067	0.0125
252	0.0192	0.0067	0.0125
253	0.0190	0.0067	0.0124
254	0.0189	0.0066	0.0123
255	0.0188	0.0066	0.0122
256	0.0187	0.0065	0.0122
257	0.0186	0.0065	0.0121
258	0.0185	0.0065	0.0120
259	0.0184	0.0064	0.0120
260	0.0183	0.0064	0.0119
261	0.0182	0.0064	0.0118
262	0.0181	0.0063	0.0118
263	0.0180	0.0063	0.0117
264	0.0179	0.0063	0.0116
265	0.0178	0.0062	0.0116
266	0.0177	0.0062	0.0115
267	0.0176	0.0062	0.0115
268	0.0175	0.0061	0.0114
269	0.0175	0.0061	0.0114
270	0.0174	0.0061	0.0113
271	0.0173	0.0061	0.0112
272	0.0172	0.0060	0.0112
273	0.0171	0.0060	0.0111
274	0.0171	0.0060	0.0111
275	0.0170	0.0059	0.0110
276	0.0169	0.0059	0.0110
277	0.0168	0.0059	0.0109
278	0.0168	0.0059	0.0109
279	0.0167	0.0058	0.0109
280	0.0166	0.0058	0.0108
281	0.0166	0.0058	0.0108
282	0.0165	0.0058	0.0107
283	0.0164	0.0057	0.0107
284	0.0164	0.0057	0.0106
285	0.0163	0.0057	0.0106
286	0.0162	0.0057	0.0105
287	0.0162	0.0057	0.0105

```
      288             0.0161          0.0056             0.0105
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      2.41(In)
      Total effective rainfall =      4.88(In)
      Peak flow rate in flood hydrograph =     27.00(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       0.0005      0.07  Q         |          |          |          |
  0+10       0.0034      0.42  Q         |          |          |          |
  0+15       0.0100      0.97  VQ        |          |          |          |
  0+20       0.0181      1.17  VQ        |          |          |          |
  0+25       0.0270      1.29  VQ        |          |          |          |
  0+30       0.0364      1.37  VQ        |          |          |          |
  0+35       0.0461      1.42  VQ        |          |          |          |
  0+40       0.0561      1.45  VQ        |          |          |          |
  0+45       0.0661      1.46  VQ        |          |          |          |
  0+50       0.0762      1.47  VQ        |          |          |          |
  0+55       0.0864      1.48  VQ        |          |          |          |
  1+ 0       0.0967      1.49  VQ        |          |          |          |
  1+ 5       0.1069      1.49  VQ        |          |          |          |
  1+10       0.1172      1.50  VQ        |          |          |          |
  1+15       0.1275      1.50  |Q        |          |          |          |
  1+20       0.1379      1.50  |VQ       |          |          |          |
  1+25       0.1483      1.50  |VQ       |          |          |          |
  1+30       0.1586      1.51  |VQ       |          |          |          |
  1+35       0.1690      1.51  |VQ       |          |          |          |
  1+40       0.1795      1.51  |VQ       |          |          |          |
  1+45       0.1899      1.52  |VQ       |          |          |          |
  1+50       0.2004      1.52  |VQ       |          |          |          |
  1+55       0.2109      1.52  |VQ       |          |          |          |
  2+ 0       0.2214      1.53  |VQ       |          |          |          |
  2+ 5       0.2319      1.53  |VQ       |          |          |          |
  2+10       0.2425      1.53  | Q       |          |          |          |
  2+15       0.2531      1.54  | Q       |          |          |          |
  2+20       0.2637      1.54  | Q       |          |          |          |
  2+25       0.2743      1.54  | Q       |          |          |          |
  2+30       0.2850      1.55  | Q       |          |          |          |
  2+35       0.2957      1.55  | Q       |          |          |          |
  2+40       0.3064      1.55  | Q       |          |          |          |
  2+45       0.3171      1.56  | Q       |          |          |          |
  2+50       0.3278      1.56  | Q       |          |          |          |
  2+55       0.3386      1.56  | Q       |          |          |          |
  3+ 0       0.3494      1.57  | Q       |          |          |          |
  3+ 5       0.3602      1.57  | QV      |          |          |          |
  3+10       0.3711      1.58  | QV      |          |          |          |
  3+15       0.3820      1.58  | QV      |          |          |          |
  3+20       0.3929      1.58  | QV      |          |          |          |
  3+25       0.4038      1.59  | QV      |          |          |          |
  3+30       0.4147      1.59  | QV      |          |          |          |
  3+35       0.4257      1.59  | QV      |          |          |          |
  3+40       0.4367      1.60  | QV      |          |          |          |
  3+45       0.4478      1.60  | QV      |          |          |          |
  3+50       0.4588      1.61  | QV      |          |          |          |
  3+55       0.4699      1.61  | QV      |          |          |          |
  4+ 0       0.4810      1.61  | Q V     |          |          |          |
  4+ 5       0.4922      1.62  | Q V     |          |          |          |
  4+10       0.5033      1.62  | Q V     |          |          |          |
  4+15       0.5145      1.63  | Q V     |          |          |          |
  4+20       0.5258      1.63  | Q V     |          |          |          |
  4+25       0.5370      1.63  | Q V     |          |          |          |
  4+30       0.5483      1.64  | Q V     |          |          |          |
  4+35       0.5596      1.64  | Q V     |          |          |          |
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 4+40      0.5709      1.65  | Q V     |         |         |         |
 4+45      0.5823      1.65  | Q V     |         |         |         |
 4+50      0.5937      1.66  | Q  V    |         |         |         |
 4+55      0.6052      1.66  | Q  V    |         |         |         |
 5+ 0      0.6166      1.66  | Q  V    |         |         |         |
 5+ 5      0.6281      1.67  | Q  V    |         |         |         |
 5+10      0.6397      1.67  | Q  V    |         |         |         |
 5+15      0.6512      1.68  | Q  V    |         |         |         |
 5+20      0.6628      1.68  | Q  V    |         |         |         |
 5+25      0.6744      1.69  | Q  V    |         |         |         |
 5+30      0.6861      1.69  | Q  V    |         |         |         |
 5+35      0.6978      1.70  | Q  V    |         |         |         |
 5+40      0.7095      1.70  | Q   V   |         |         |         |
 5+45      0.7213      1.71  | Q   V   |         |         |         |
 5+50      0.7330      1.71  | Q   V   |         |         |         |
 5+55      0.7449      1.72  | Q   V   |         |         |         |
 6+ 0      0.7567      1.72  | Q   V   |         |         |         |
 6+ 5      0.7686      1.73  | Q   V   |         |         |         |
 6+10      0.7806      1.73  | Q   V   |         |         |         |
 6+15      0.7925      1.74  | Q   V   |         |         |         |
 6+20      0.8045      1.74  | Q   V   |         |         |         |
 6+25      0.8166      1.75  | Q   V   |         |         |         |
 6+30      0.8287      1.75  | Q    V  |         |         |         |
 6+35      0.8408      1.76  | Q    V  |         |         |         |
 6+40      0.8529      1.77  | Q    V  |         |         |         |
 6+45      0.8651      1.77  | Q    V  |         |         |         |
 6+50      0.8774      1.78  | Q    V  |         |         |         |
 6+55      0.8896      1.78  | Q    V  |         |         |         |
 7+ 0      0.9020      1.79  | Q    V  |         |         |         |
 7+ 5      0.9143      1.79  | Q    V  |         |         |         |
 7+10      0.9267      1.80  | Q    V  |         |         |         |
 7+15      0.9392      1.81  | Q    V  |         |         |         |
 7+20      0.9516      1.81  | Q     V |         |         |         |
 7+25      0.9642      1.82  | Q     V |         |         |         |
 7+30      0.9767      1.82  | Q     V |         |         |         |
 7+35      0.9893      1.83  | Q     V |         |         |         |
 7+40      1.0020      1.84  | Q     V |         |         |         |
 7+45      1.0147      1.84  | Q     V |         |         |         |
 7+50      1.0274      1.85  | Q     V |         |         |         |
 7+55      1.0402      1.86  | Q     V |         |         |         |
 8+ 0      1.0531      1.86  | Q     V |         |         |         |
 8+ 5      1.0660      1.87  | Q      V|         |         |         |
 8+10      1.0789      1.88  | Q      V|         |         |         |
 8+15      1.0919      1.89  | Q      V|         |         |         |
 8+20      1.1049      1.89  | Q      V|         |         |         |
 8+25      1.1180      1.90  | Q      V|         |         |         |
 8+30      1.1311      1.91  | Q      V|         |         |         |
 8+35      1.1443      1.92  | Q      V|         |         |         |
 8+40      1.1576      1.92  | Q      V|         |         |         |
 8+45      1.1709      1.93  | Q      V|         |         |         |
 8+50      1.1842      1.94  | Q       V         |         |         |
 8+55      1.1976      1.95  | Q       V         |         |         |
 9+ 0      1.2111      1.95  | Q       V         |         |         |
 9+ 5      1.2246      1.96  | Q       V         |         |         |
 9+10      1.2382      1.97  | Q       V         |         |         |
 9+15      1.2518      1.98  | Q       V         |         |         |
 9+20      1.2655      1.99  | Q       V         |         |         |
 9+25      1.2793      2.00  | Q       V         |         |         |
 9+30      1.2931      2.01  | Q       V         |         |         |
 9+35      1.3070      2.02  | Q       |V        |         |         |
 9+40      1.3209      2.02  | Q       |V        |         |         |
 9+45      1.3349      2.03  | Q       |V        |         |         |
 9+50      1.3490      2.04  | Q       |V        |         |         |
 9+55      1.3631      2.05  | Q       |V        |         |         |
10+ 0      1.3773      2.06  | Q       |V        |         |         |
10+ 5      1.3916      2.07  | Q       |V        |         |         |
10+10      1.4060      2.08  | Q       |V        |         |         |
10+15      1.4204      2.09  | Q       | V       |         |         |
10+20      1.4349      2.10  | Q       | V       |         |         |
10+25      1.4495      2.12  | Q       | V       |         |         |
10+30      1.4641      2.13  | Q       | V       |         |         |
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10+35      1.4788     2.14  | Q       | V       |         |         |
10+40      1.4936     2.15  | Q       | V       |         |         |
10+45      1.5085     2.16  | Q       | V       |         |         |
10+50      1.5235     2.17  | Q       | V       |         |         |
10+55      1.5386     2.19  | Q       |  V      |         |         |
11+ 0      1.5537     2.20  | Q       |  V      |         |         |
11+ 5      1.5689     2.21  | Q       |  V      |         |         |
11+10      1.5843     2.22  | Q       |  V      |         |         |
11+15      1.5997     2.24  | Q       |  V      |         |         |
11+20      1.6152     2.25  |  Q      |  V      |         |         |
11+25      1.6308     2.27  |  Q      |  V      |         |         |
11+30      1.6465     2.28  |  Q      |  V      |         |         |
11+35      1.6623     2.30  |  Q      |   V     |         |         |
11+40      1.6782     2.31  |  Q      |   V     |         |         |
11+45      1.6942     2.33  |  Q      |   V     |         |         |
11+50      1.7104     2.34  |  Q      |   V     |         |         |
11+55      1.7266     2.36  |  Q      |   V     |         |         |
12+ 0      1.7430     2.37  |  Q      |   V     |         |         |
12+ 5      1.7594     2.39  |  Q      |   V     |         |         |
12+10      1.7759     2.39  |  Q      |    V    |         |         |
12+15      1.7923     2.39  |  Q      |    V    |         |         |
12+20      1.8089     2.40  |  Q      |    V    |         |         |
12+25      1.8255     2.42  |  Q      |    V    |         |         |
12+30      1.8423     2.43  |  Q      |    V    |         |         |
12+35      1.8591     2.45  |  Q      |    V    |         |         |
12+40      1.8762     2.47  |  Q      |    V    |         |         |
12+45      1.8933     2.49  |  Q      |     V   |         |         |
12+50      1.9106     2.52  |  Q      |     V   |         |         |
12+55      1.9281     2.54  |  Q      |     V   |         |         |
13+ 0      1.9458     2.56  |  Q      |     V   |         |         |
13+ 5      1.9636     2.59  |  Q      |     V   |         |         |
13+10      1.9816     2.61  |  Q      |     V   |         |         |
13+15      1.9998     2.64  |  Q      |     V   |         |         |
13+20      2.0182     2.67  |  Q      |      V  |         |         |
13+25      2.0368     2.70  |  Q      |      V  |         |         |
13+30      2.0556     2.73  |  Q      |      V  |         |         |
13+35      2.0746     2.76  |  Q      |      V  |         |         |
13+40      2.0939     2.80  |  Q      |      V  |         |         |
13+45      2.1134     2.83  |  Q      |      V  |         |         |
13+50      2.1332     2.87  |  Q      |       V |         |         |
13+55      2.1532     2.91  |  Q      |       V |         |         |
14+ 0      2.1735     2.95  |  Q      |       V |         |         |
14+ 5      2.1941     2.99  |  Q      |       V |         |         |
14+10      2.2149     3.03  |   Q     |       V |         |         |
14+15      2.2362     3.08  |   Q     |       V |         |         |
14+20      2.2577     3.13  |   Q     |        V|         |         |
14+25      2.2797     3.19  |   Q     |        V|         |         |
14+30      2.3020     3.24  |   Q     |        V|         |         |
14+35      2.3248     3.30  |   Q     |        V|         |         |
14+40      2.3480     3.37  |   Q     |        V|         |         |
14+45      2.3717     3.44  |   Q     |         V         |         |
14+50      2.3958     3.51  |   Q     |         V         |         |
14+55      2.4206     3.60  |   Q     |         V         |         |
15+ 0      2.4460     3.68  |   Q     |         V         |         |
15+ 5      2.4720     3.78  |    Q    |         V         |         |
15+10      2.4988     3.89  |    Q    |         |V        |         |
15+15      2.5264     4.01  |    Q    |         |V        |         |
15+20      2.5549     4.14  |    Q    |         |V        |         |
15+25      2.5838     4.19  |    Q    |         |V        |         |
15+30      2.6098     3.77  |    Q    |         | V       |         |
15+35      2.6309     3.08  |   Q     |         | V       |         |
15+40      2.6514     2.98  |  Q      |         | V       |         |
15+45      2.6727     3.09  |   Q     |         | V       |         |
15+50      2.6960     3.37  |   Q     |         | V       |         |
15+55      2.7230     3.93  |    Q    |         |  V      |         |
16+ 0      2.7575     5.01  |     Q   |         |  V      |         |
16+ 5      2.8218     9.34  |         | Q       |  V      |         |
16+10      2.9653    20.82  |         |         |    V Q  |         |
16+15      3.1512    27.00  |         |         |     V   |     Q   |
16+20      3.2406    12.99  |         |      Q  |      V  |         |
16+25      3.3010     8.76  |         |Q        |      V  |         |
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16+30      3.3487     6.94  |         Q|          |        V |          |
16+35      3.3911     6.15  |        Q |          |        V |          |
16+40      3.4269     5.20  |      Q   |          |         V|          |
16+45      3.4574     4.42  |     Q    |          |         V|          |
16+50      3.4858     4.13  |     Q    |          |         V|          |
16+55      3.5126     3.89  |     Q    |          |         V|          |
17+ 0      3.5384     3.74  |    Q     |          |          V          |
17+ 5      3.5625     3.50  |    Q     |          |          V          |
17+10      3.5852     3.30  |    Q     |          |          V          |
17+15      3.6069     3.15  |    Q     |          |          V          |
17+20      3.6279     3.05  |    Q     |          |          V          |
17+25      3.6483     2.96  |   Q      |          |          V          |
17+30      3.6681     2.88  |   Q      |          |          |V         |
17+35      3.6874     2.81  |   Q      |          |          |V         |
17+40      3.7063     2.74  |   Q      |          |          |V         |
17+45      3.7248     2.68  |   Q      |          |          |V         |
17+50      3.7428     2.62  |   Q      |          |          |V         |
17+55      3.7605     2.57  |   Q      |          |          |V         |
18+ 0      3.7779     2.52  |   Q      |          |          | V        |
18+ 5      3.7949     2.48  |   Q      |          |          | V        |
18+10      3.8118     2.45  |   Q      |          |          | V        |
18+15      3.8285     2.43  |   Q      |          |          | V        |
18+20      3.8451     2.40  |   Q      |          |          | V        |
18+25      3.8614     2.37  |   Q      |          |          | V        |
18+30      3.8775     2.34  |   Q      |          |          | V        |
18+35      3.8934     2.31  |   Q      |          |          |  V       |
18+40      3.9091     2.28  |   Q      |          |          |  V       |
18+45      3.9247     2.25  |   Q      |          |          |  V       |
18+50      3.9400     2.23  | Q        |          |          |  V       |
18+55      3.9551     2.20  | Q        |          |          |  V       |
19+ 0      3.9701     2.18  | Q        |          |          |  V       |
19+ 5      3.9849     2.15  | Q        |          |          |  V       |
19+10      3.9996     2.13  | Q        |          |          |  V       |
19+15      4.0141     2.11  | Q        |          |          |   V      |
19+20      4.0285     2.08  | Q        |          |          |   V      |
19+25      4.0427     2.06  | Q        |          |          |   V      |
19+30      4.0568     2.04  | Q        |          |          |   V      |
19+35      4.0707     2.03  | Q        |          |          |   V      |
19+40      4.0845     2.01  | Q        |          |          |   V      |
19+45      4.0982     1.99  | Q        |          |          |   V      |
19+50      4.1118     1.97  | Q        |          |          |   V      |
19+55      4.1253     1.96  | Q        |          |          |   V      |
20+ 0      4.1386     1.94  | Q        |          |          |    V     |
20+ 5      4.1519     1.92  | Q        |          |          |    V     |
20+10      4.1650     1.91  | Q        |          |          |    V     |
20+15      4.1781     1.89  | Q        |          |          |    V     |
20+20      4.1910     1.88  | Q        |          |          |    V     |
20+25      4.2039     1.87  | Q        |          |          |    V     |
20+30      4.2166     1.85  | Q        |          |          |    V     |
20+35      4.2293     1.84  | Q        |          |          |    V     |
20+40      4.2418     1.83  | Q        |          |          |    V     |
20+45      4.2543     1.81  | Q        |          |          |     V    |
20+50      4.2667     1.80  | Q        |          |          |     V    |
20+55      4.2790     1.79  | Q        |          |          |     V    |
21+ 0      4.2913     1.78  | Q        |          |          |     V    |
21+ 5      4.3034     1.77  | Q        |          |          |     V    |
21+10      4.3155     1.75  | Q        |          |          |     V    |
21+15      4.3275     1.74  | Q        |          |          |     V    |
21+20      4.3395     1.73  | Q        |          |          |     V    |
21+25      4.3513     1.72  | Q        |          |          |     V    |
21+30      4.3631     1.71  | Q        |          |          |      V   |
21+35      4.3749     1.70  | Q        |          |          |      V   |
21+40      4.3865     1.69  | Q        |          |          |      V   |
21+45      4.3981     1.68  | Q        |          |          |      V   |
21+50      4.4096     1.67  | Q        |          |          |      V   |
21+55      4.4211     1.67  | Q        |          |          |      V   |
22+ 0      4.4325     1.66  | Q        |          |          |      V   |
22+ 5      4.4439     1.65  | Q        |          |          |      V   |
22+10      4.4551     1.64  | Q        |          |          |      V   |
22+15      4.4664     1.63  | Q        |          |          |      V   |
22+20      4.4775     1.62  | Q        |          |          |      V   |
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   22+25       4.4887      1.61  | Q       |         |         |       V |
   22+30       4.4997      1.61  | Q       |         |         |       V |
   22+35       4.5107      1.60  | Q       |         |         |       V |
   22+40       4.5217      1.59  | Q       |         |         |       V |
   22+45       4.5326      1.58  | Q       |         |         |       V |
   22+50       4.5434      1.58  | Q       |         |         |       V |
   22+55       4.5542      1.57  | Q       |         |         |       V |
   23+ 0       4.5650      1.56  | Q       |         |         |       V |
   23+ 5       4.5757      1.55  | Q       |         |         |       V |
   23+10       4.5863      1.55  | Q       |         |         |       V |
   23+15       4.5970      1.54  | Q       |         |         |       V |
   23+20       4.6075      1.53  | Q       |         |         |        V|
   23+25       4.6180      1.53  | Q       |         |         |        V|
   23+30       4.6285      1.52  | Q       |         |         |        V|
   23+35       4.6389      1.51  | Q       |         |         |        V|
   23+40       4.6493      1.51  | Q       |         |         |        V|
   23+45       4.6597      1.50  | Q       |         |         |        V|
   23+50       4.6700      1.50  |Q        |         |         |        V|
   23+55       4.6802      1.49  |Q        |         |         |        V|
   24+ 0       4.6904      1.48  |Q        |         |         |        V|
   24+ 5       4.7002      1.41  |Q        |         |         |        V|
   24+10       4.7074      1.05  |Q        |         |         |        V|
   24+15       4.7109      0.50  Q         |         |         |        V|
   24+20       4.7129      0.30  Q         |         |         |        V|
   24+25       4.7142      0.18  Q         |         |         |        V|
   24+30       4.7149      0.11  Q         |         |         |        V|
   24+35       4.7153      0.06  Q         |         |         |        V|
   24+40       4.7156      0.03  Q         |         |         |        V|
   24+45       4.7157      0.02  Q         |         |         |        V|
   24+50       4.7158      0.01  Q         |         |         |        V|
   24+55       4.7159      0.01  Q         |         |         |        V|
   25+ 0       4.7159      0.00  Q         |         |         |        V|
   25+ 5       4.7159      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'B' – 25 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
25 YEAR 24 HOUR STORM
DECEMBER 16, 2024
----------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            11.61           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            11.61           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            11.61          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            11.61           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            11.61           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            11.61          24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      78.0         11.61      1.000     0.404    1.000    0.404

Area-averaged adjusted loss rate Fm (In/Hr) =  0.404

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
11.61	1.000	78.0	78.0	2.82	0.707

Area-averaged catchment yield fraction, Y = 0.707
Area-averaged low loss fraction, Yb = 0.293
User entry of time of concentration = 0.196 (hours)
++
Watershed area = 11.61(Ac.)
Catchment Lag time = 0.157 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 53.1924
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.404(In/Hr)
Average low loss rate fraction (Yb) = 0.293 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 11.61(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.569(In)
30-minute factor = 0.999 Adjusted rainfall = 0.973(In)
1-hour factor = 0.999 Adjusted rainfall = 1.198(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 140.41 (CFS))	
1	4.677	6.567
2	28.694	33.722
3	65.919	52.267
4	79.678	19.320
5	87.633	11.169
6	92.737	7.167
7	95.953	4.516
8	97.772	2.553
9	98.510	1.037
10	99.015	0.709
11	99.374	0.505
12	99.739	0.511
13	99.927	0.265
14	100.000	0.102

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5686	0.5686
2	0.7000	0.1314
3	0.7906	0.0905
4	0.8619	0.0713
5	0.9215	0.0597
6	0.9733	0.0518
7	1.0194	0.0461
8	1.0611	0.0417
9	1.0992	0.0382
10	1.1345	0.0353
11	1.1674	0.0329
12	1.1983	0.0309

13	1.2589	0.0606
14	1.3177	0.0588
15	1.3750	0.0572
16	1.4308	0.0558
17	1.4852	0.0545
18	1.5385	0.0532
19	1.5906	0.0521
20	1.6417	0.0511
21	1.6918	0.0501
22	1.7410	0.0492
23	1.7893	0.0483
24	1.8369	0.0475
25	1.8837	0.0468
26	1.9297	0.0461
27	1.9752	0.0454
28	2.0199	0.0448
29	2.0641	0.0442
30	2.1076	0.0436
31	2.1507	0.0430
32	2.1932	0.0425
33	2.2351	0.0420
34	2.2766	0.0415
35	2.3177	0.0410
36	2.3583	0.0406
37	2.3984	0.0401
38	2.4381	0.0397
39	2.4774	0.0393
40	2.5164	0.0389
41	2.5549	0.0386
42	2.5931	0.0382
43	2.6310	0.0379
44	2.6685	0.0375
45	2.7057	0.0372
46	2.7425	0.0369
47	2.7791	0.0366
48	2.8154	0.0363
49	2.8514	0.0360
50	2.8870	0.0357
51	2.9225	0.0354
52	2.9576	0.0352
53	2.9925	0.0349
54	3.0272	0.0346
55	3.0616	0.0344
56	3.0957	0.0342
57	3.1297	0.0339
58	3.1634	0.0337
59	3.1969	0.0335
60	3.2301	0.0333
61	3.2632	0.0330
62	3.2960	0.0328
63	3.3286	0.0326
64	3.3611	0.0324
65	3.3933	0.0322
66	3.4254	0.0321
67	3.4573	0.0319
68	3.4889	0.0317
69	3.5205	0.0315
70	3.5518	0.0313
71	3.5830	0.0312
72	3.6139	0.0310
73	3.6476	0.0336
74	3.6810	0.0335
75	3.7144	0.0333
76	3.7475	0.0332
77	3.7806	0.0330
78	3.8134	0.0329
79	3.8462	0.0327
80	3.8788	0.0326
81	3.9113	0.0325
82	3.9436	0.0323
83	3.9759	0.0322

84	4.0079	0.0321
85	4.0399	0.0320
86	4.0718	0.0318
87	4.1035	0.0317
88	4.1351	0.0316
89	4.1666	0.0315
90	4.1979	0.0314
91	4.2292	0.0313
92	4.2603	0.0311
93	4.2914	0.0310
94	4.3223	0.0309
95	4.3531	0.0308
96	4.3838	0.0307
97	4.4144	0.0306
98	4.4449	0.0305
99	4.4753	0.0304
100	4.5056	0.0303
101	4.5358	0.0302
102	4.5659	0.0301
103	4.5959	0.0300
104	4.6258	0.0299
105	4.6556	0.0298
106	4.6853	0.0297
107	4.7149	0.0296
108	4.7445	0.0295
109	4.7739	0.0294
110	4.8033	0.0294
111	4.8325	0.0293
112	4.8617	0.0292
113	4.8908	0.0291
114	4.9198	0.0290
115	4.9488	0.0289
116	4.9776	0.0288
117	5.0064	0.0288
118	5.0350	0.0287
119	5.0636	0.0286
120	5.0922	0.0285
121	5.1206	0.0284
122	5.1490	0.0284
123	5.1773	0.0283
124	5.2055	0.0282
125	5.2336	0.0281
126	5.2617	0.0281
127	5.2897	0.0280
128	5.3176	0.0279
129	5.3455	0.0279
130	5.3733	0.0278
131	5.4010	0.0277
132	5.4286	0.0276
133	5.4562	0.0276
134	5.4837	0.0275
135	5.5111	0.0274
136	5.5385	0.0274
137	5.5658	0.0273
138	5.5930	0.0272
139	5.6202	0.0272
140	5.6473	0.0271
141	5.6744	0.0270
142	5.7014	0.0270
143	5.7283	0.0269
144	5.7551	0.0269
145	5.7819	0.0268
146	5.8087	0.0267
147	5.8353	0.0267
148	5.8620	0.0266
149	5.8885	0.0266
150	5.9150	0.0265
151	5.9415	0.0264
152	5.9678	0.0264
153	5.9942	0.0263
154	6.0204	0.0263

155	6.0467	0.0262
156	6.0728	0.0262
157	6.0989	0.0261
158	6.1250	0.0260
159	6.1510	0.0260
160	6.1769	0.0259
161	6.2028	0.0259
162	6.2286	0.0258
163	6.2544	0.0258
164	6.2801	0.0257
165	6.3058	0.0257
166	6.3315	0.0256
167	6.3570	0.0256
168	6.3826	0.0255
169	6.4080	0.0255
170	6.4335	0.0254
171	6.4588	0.0254
172	6.4842	0.0253
173	6.5095	0.0253
174	6.5347	0.0252
175	6.5599	0.0252
176	6.5850	0.0251
177	6.6101	0.0251
178	6.6352	0.0250
179	6.6602	0.0250
180	6.6851	0.0250
181	6.7100	0.0249
182	6.7349	0.0249
183	6.7597	0.0248
184	6.7845	0.0248
185	6.8092	0.0247
186	6.8339	0.0247
187	6.8585	0.0246
188	6.8831	0.0246
189	6.9077	0.0246
190	6.9322	0.0245
191	6.9567	0.0245
192	6.9811	0.0244
193	7.0055	0.0244
194	7.0298	0.0243
195	7.0541	0.0243
196	7.0784	0.0243
197	7.1026	0.0242
198	7.1268	0.0242
199	7.1509	0.0241
200	7.1750	0.0241
201	7.1991	0.0241
202	7.2231	0.0240
203	7.2471	0.0240
204	7.2711	0.0239
205	7.2950	0.0239
206	7.3188	0.0239
207	7.3427	0.0238
208	7.3665	0.0238
209	7.3902	0.0238
210	7.4139	0.0237
211	7.4376	0.0237
212	7.4612	0.0236
213	7.4849	0.0236
214	7.5084	0.0236
215	7.5320	0.0235
216	7.5555	0.0235
217	7.5789	0.0235
218	7.6023	0.0234
219	7.6257	0.0234
220	7.6491	0.0234
221	7.6724	0.0233
222	7.6957	0.0233
223	7.7190	0.0233
224	7.7422	0.0232
225	7.7654	0.0232

226	7.7885	0.0232
227	7.8116	0.0231
228	7.8347	0.0231
229	7.8578	0.0231
230	7.8808	0.0230
231	7.9038	0.0230
232	7.9267	0.0230
233	7.9496	0.0229
234	7.9725	0.0229
235	7.9954	0.0229
236	8.0182	0.0228
237	8.0410	0.0228
238	8.0638	0.0228
239	8.0865	0.0227
240	8.1092	0.0227
241	8.1318	0.0227
242	8.1545	0.0226
243	8.1771	0.0226
244	8.1997	0.0226
245	8.2222	0.0225
246	8.2447	0.0225
247	8.2672	0.0225
248	8.2896	0.0225
249	8.3121	0.0224
250	8.3345	0.0224
251	8.3568	0.0224
252	8.3792	0.0223
253	8.4015	0.0223
254	8.4237	0.0223
255	8.4460	0.0222
256	8.4682	0.0222
257	8.4904	0.0222
258	8.5126	0.0222
259	8.5347	0.0221
260	8.5568	0.0221
261	8.5789	0.0221
262	8.6009	0.0221
263	8.6230	0.0220
264	8.6450	0.0220
265	8.6669	0.0220
266	8.6889	0.0219
267	8.7108	0.0219
268	8.7327	0.0219
269	8.7545	0.0219
270	8.7764	0.0218
271	8.7982	0.0218
272	8.8199	0.0218
273	8.8417	0.0218
274	8.8634	0.0217
275	8.8851	0.0217
276	8.9068	0.0217
277	8.9284	0.0216
278	8.9501	0.0216
279	8.9717	0.0216
280	8.9932	0.0216
281	9.0148	0.0215
282	9.0363	0.0215
283	9.0578	0.0215
284	9.0793	0.0215
285	9.1007	0.0214
286	9.1222	0.0214
287	9.1436	0.0214
288	9.1649	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0063	0.0151
2	0.0214	0.0063	0.0151
3	0.0214	0.0063	0.0152

4	0.0215	0.0063	0.0152
5	0.0215	0.0063	0.0152
6	0.0215	0.0063	0.0152
7	0.0216	0.0063	0.0153
8	0.0216	0.0063	0.0153
9	0.0217	0.0064	0.0153
10	0.0217	0.0064	0.0153
11	0.0218	0.0064	0.0154
12	0.0218	0.0064	0.0154
13	0.0218	0.0064	0.0154
14	0.0219	0.0064	0.0154
15	0.0219	0.0064	0.0155
16	0.0219	0.0064	0.0155
17	0.0220	0.0065	0.0155
18	0.0220	0.0065	0.0156
19	0.0221	0.0065	0.0156
20	0.0221	0.0065	0.0156
21	0.0222	0.0065	0.0157
22	0.0222	0.0065	0.0157
23	0.0222	0.0065	0.0157
24	0.0223	0.0065	0.0157
25	0.0223	0.0066	0.0158
26	0.0224	0.0066	0.0158
27	0.0224	0.0066	0.0158
28	0.0225	0.0066	0.0159
29	0.0225	0.0066	0.0159
30	0.0225	0.0066	0.0159
31	0.0226	0.0066	0.0160
32	0.0226	0.0066	0.0160
33	0.0227	0.0067	0.0160
34	0.0227	0.0067	0.0161
35	0.0228	0.0067	0.0161
36	0.0228	0.0067	0.0161
37	0.0229	0.0067	0.0162
38	0.0229	0.0067	0.0162
39	0.0230	0.0067	0.0162
40	0.0230	0.0068	0.0163
41	0.0231	0.0068	0.0163
42	0.0231	0.0068	0.0163
43	0.0232	0.0068	0.0164
44	0.0232	0.0068	0.0164
45	0.0233	0.0068	0.0165
46	0.0233	0.0068	0.0165
47	0.0234	0.0069	0.0165
48	0.0234	0.0069	0.0166
49	0.0235	0.0069	0.0166
50	0.0235	0.0069	0.0166
51	0.0236	0.0069	0.0167
52	0.0236	0.0069	0.0167
53	0.0237	0.0070	0.0168
54	0.0238	0.0070	0.0168
55	0.0238	0.0070	0.0168
56	0.0239	0.0070	0.0169
57	0.0239	0.0070	0.0169
58	0.0240	0.0070	0.0169
59	0.0241	0.0071	0.0170
60	0.0241	0.0071	0.0170
61	0.0242	0.0071	0.0171
62	0.0242	0.0071	0.0171
63	0.0243	0.0071	0.0172
64	0.0243	0.0071	0.0172
65	0.0244	0.0072	0.0173
66	0.0245	0.0072	0.0173
67	0.0246	0.0072	0.0174
68	0.0246	0.0072	0.0174
69	0.0247	0.0072	0.0174
70	0.0247	0.0073	0.0175
71	0.0248	0.0073	0.0175
72	0.0249	0.0073	0.0176
73	0.0250	0.0073	0.0176
74	0.0250	0.0073	0.0177

75	0.0251	0.0074	0.0177
76	0.0251	0.0074	0.0178
77	0.0252	0.0074	0.0178
78	0.0253	0.0074	0.0179
79	0.0254	0.0074	0.0179
80	0.0254	0.0075	0.0180
81	0.0255	0.0075	0.0180
82	0.0256	0.0075	0.0181
83	0.0257	0.0075	0.0181
84	0.0257	0.0075	0.0182
85	0.0258	0.0076	0.0183
86	0.0259	0.0076	0.0183
87	0.0260	0.0076	0.0184
88	0.0260	0.0076	0.0184
89	0.0262	0.0077	0.0185
90	0.0262	0.0077	0.0185
91	0.0263	0.0077	0.0186
92	0.0264	0.0077	0.0186
93	0.0265	0.0078	0.0187
94	0.0266	0.0078	0.0188
95	0.0267	0.0078	0.0189
96	0.0267	0.0078	0.0189
97	0.0269	0.0079	0.0190
98	0.0269	0.0079	0.0190
99	0.0270	0.0079	0.0191
100	0.0271	0.0080	0.0192
101	0.0272	0.0080	0.0192
102	0.0273	0.0080	0.0193
103	0.0274	0.0080	0.0194
104	0.0275	0.0081	0.0194
105	0.0276	0.0081	0.0195
106	0.0277	0.0081	0.0196
107	0.0279	0.0082	0.0197
108	0.0279	0.0082	0.0197
109	0.0281	0.0082	0.0198
110	0.0281	0.0083	0.0199
111	0.0283	0.0083	0.0200
112	0.0284	0.0083	0.0200
113	0.0285	0.0084	0.0202
114	0.0286	0.0084	0.0202
115	0.0288	0.0084	0.0203
116	0.0288	0.0085	0.0204
117	0.0290	0.0085	0.0205
118	0.0291	0.0085	0.0206
119	0.0293	0.0086	0.0207
120	0.0294	0.0086	0.0207
121	0.0295	0.0087	0.0209
122	0.0296	0.0087	0.0209
123	0.0298	0.0087	0.0211
124	0.0299	0.0088	0.0211
125	0.0301	0.0088	0.0213
126	0.0302	0.0089	0.0213
127	0.0304	0.0089	0.0215
128	0.0305	0.0089	0.0216
129	0.0307	0.0090	0.0217
130	0.0308	0.0090	0.0218
131	0.0310	0.0091	0.0219
132	0.0311	0.0091	0.0220
133	0.0314	0.0092	0.0222
134	0.0315	0.0092	0.0222
135	0.0317	0.0093	0.0224
136	0.0318	0.0093	0.0225
137	0.0321	0.0094	0.0227
138	0.0322	0.0094	0.0228
139	0.0325	0.0095	0.0230
140	0.0326	0.0096	0.0230
141	0.0329	0.0096	0.0232
142	0.0330	0.0097	0.0233
143	0.0333	0.0098	0.0235
144	0.0335	0.0098	0.0237
145	0.0310	0.0091	0.0219

146	0.0312	0.0091	0.0220
147	0.0315	0.0092	0.0223
148	0.0317	0.0093	0.0224
149	0.0321	0.0094	0.0227
150	0.0322	0.0095	0.0228
151	0.0326	0.0096	0.0231
152	0.0328	0.0096	0.0232
153	0.0333	0.0098	0.0235
154	0.0335	0.0098	0.0237
155	0.0339	0.0100	0.0240
156	0.0342	0.0100	0.0241
157	0.0346	0.0102	0.0245
158	0.0349	0.0102	0.0247
159	0.0354	0.0104	0.0250
160	0.0357	0.0105	0.0252
161	0.0363	0.0106	0.0256
162	0.0366	0.0107	0.0258
163	0.0372	0.0109	0.0263
164	0.0375	0.0110	0.0265
165	0.0382	0.0112	0.0270
166	0.0386	0.0113	0.0272
167	0.0393	0.0115	0.0278
168	0.0397	0.0116	0.0281
169	0.0406	0.0119	0.0287
170	0.0410	0.0120	0.0290
171	0.0420	0.0123	0.0297
172	0.0425	0.0125	0.0300
173	0.0436	0.0128	0.0308
174	0.0442	0.0130	0.0312
175	0.0454	0.0133	0.0321
176	0.0461	0.0135	0.0326
177	0.0475	0.0139	0.0336
178	0.0483	0.0142	0.0342
179	0.0501	0.0147	0.0354
180	0.0511	0.0150	0.0361
181	0.0532	0.0156	0.0376
182	0.0545	0.0160	0.0385
183	0.0572	0.0168	0.0404
184	0.0588	0.0173	0.0416
185	0.0309	0.0091	0.0218
186	0.0329	0.0097	0.0233
187	0.0382	0.0112	0.0270
188	0.0417	0.0122	0.0294
189	0.0518	0.0152	0.0366
190	0.0597	0.0175	0.0422
191	0.0905	0.0266	0.0640
192	0.1314	0.0336	0.0978
193	0.5686	0.0336	0.5350
194	0.0713	0.0209	0.0504
195	0.0461	0.0135	0.0326
196	0.0353	0.0104	0.0249
197	0.0606	0.0178	0.0428
198	0.0558	0.0164	0.0394
199	0.0521	0.0153	0.0368
200	0.0492	0.0144	0.0348
201	0.0468	0.0137	0.0331
202	0.0448	0.0131	0.0316
203	0.0430	0.0126	0.0304
204	0.0415	0.0122	0.0293
205	0.0401	0.0118	0.0284
206	0.0389	0.0114	0.0275
207	0.0379	0.0111	0.0267
208	0.0369	0.0108	0.0261
209	0.0360	0.0106	0.0254
210	0.0352	0.0103	0.0248
211	0.0344	0.0101	0.0243
212	0.0337	0.0099	0.0238
213	0.0330	0.0097	0.0234
214	0.0324	0.0095	0.0229
215	0.0319	0.0093	0.0225
216	0.0313	0.0092	0.0221

217	0.0336	0.0099	0.0238
218	0.0332	0.0097	0.0234
219	0.0327	0.0096	0.0231
220	0.0323	0.0095	0.0229
221	0.0320	0.0094	0.0226
222	0.0316	0.0093	0.0223
223	0.0313	0.0092	0.0221
224	0.0309	0.0091	0.0219
225	0.0306	0.0090	0.0216
226	0.0303	0.0089	0.0214
227	0.0300	0.0088	0.0212
228	0.0297	0.0087	0.0210
229	0.0294	0.0086	0.0208
230	0.0292	0.0086	0.0206
231	0.0289	0.0085	0.0204
232	0.0287	0.0084	0.0203
233	0.0284	0.0083	0.0201
234	0.0282	0.0083	0.0199
235	0.0280	0.0082	0.0198
236	0.0278	0.0081	0.0196
237	0.0276	0.0081	0.0195
238	0.0274	0.0080	0.0193
239	0.0272	0.0080	0.0192
240	0.0270	0.0079	0.0191
241	0.0268	0.0079	0.0189
242	0.0266	0.0078	0.0188
243	0.0264	0.0078	0.0187
244	0.0263	0.0077	0.0186
245	0.0261	0.0077	0.0184
246	0.0259	0.0076	0.0183
247	0.0258	0.0076	0.0182
248	0.0256	0.0075	0.0181
249	0.0255	0.0075	0.0180
250	0.0253	0.0074	0.0179
251	0.0252	0.0074	0.0178
252	0.0250	0.0073	0.0177
253	0.0249	0.0073	0.0176
254	0.0248	0.0073	0.0175
255	0.0246	0.0072	0.0174
256	0.0245	0.0072	0.0173
257	0.0244	0.0072	0.0172
258	0.0243	0.0071	0.0171
259	0.0241	0.0071	0.0171
260	0.0240	0.0070	0.0170
261	0.0239	0.0070	0.0169
262	0.0238	0.0070	0.0168
263	0.0237	0.0069	0.0167
264	0.0236	0.0069	0.0167
265	0.0235	0.0069	0.0166
266	0.0234	0.0069	0.0165
267	0.0233	0.0068	0.0164
268	0.0232	0.0068	0.0164
269	0.0231	0.0068	0.0163
270	0.0230	0.0067	0.0162
271	0.0229	0.0067	0.0162
272	0.0228	0.0067	0.0161
273	0.0227	0.0066	0.0160
274	0.0226	0.0066	0.0160
275	0.0225	0.0066	0.0159
276	0.0224	0.0066	0.0158
277	0.0223	0.0065	0.0158
278	0.0222	0.0065	0.0157
279	0.0221	0.0065	0.0156
280	0.0221	0.0065	0.0156
281	0.0220	0.0064	0.0155
282	0.0219	0.0064	0.0155
283	0.0218	0.0064	0.0154
284	0.0217	0.0064	0.0154
285	0.0216	0.0063	0.0153
286	0.0216	0.0063	0.0152
287	0.0215	0.0063	0.0152

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      288             0.0214          0.0063             0.0151
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      2.55(In)
      Total effective rainfall =      6.61(In)
      Peak flow rate in flood hydrograph =     33.11(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          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       10.0      20.0      30.0      40.0
----------------------------------------------------------------------------
  0+ 5       0.0007      0.10  Q         |         |         |         |
  0+10       0.0049      0.61  Q         |         |         |         |
  0+15       0.0145      1.40  VQ        |         |         |         |
  0+20       0.0262      1.69  VQ        |         |         |         |
  0+25       0.0390      1.86  VQ        |         |         |         |
  0+30       0.0526      1.98  VQ        |         |         |         |
  0+35       0.0667      2.05  V Q       |         |         |         |
  0+40       0.0811      2.09  V Q       |         |         |         |
  0+45       0.0956      2.11  V Q       |         |         |         |
  0+50       0.1103      2.12  V Q       |         |         |         |
  0+55       0.1250      2.14  V Q       |         |         |         |
  1+ 0       0.1398      2.15  V Q       |         |         |         |
  1+ 5       0.1546      2.15  V Q       |         |         |         |
  1+10       0.1695      2.16  |VQ       |         |         |         |
  1+15       0.1844      2.16  |VQ       |         |         |         |
  1+20       0.1993      2.17  |VQ       |         |         |         |
  1+25       0.2143      2.17  |VQ       |         |         |         |
  1+30       0.2292      2.18  |VQ       |         |         |         |
  1+35       0.2443      2.18  |VQ       |         |         |         |
  1+40       0.2593      2.18  |VQ       |         |         |         |
  1+45       0.2744      2.19  |VQ       |         |         |         |
  1+50       0.2895      2.19  |VQ       |         |         |         |
  1+55       0.3046      2.20  |VQ       |         |         |         |
  2+ 0       0.3197      2.20  |VQ       |         |         |         |
  2+ 5       0.3349      2.20  | Q       |         |         |         |
  2+10       0.3501      2.21  | Q       |         |         |         |
  2+15       0.3654      2.21  | Q       |         |         |         |
  2+20       0.3807      2.22  | Q       |         |         |         |
  2+25       0.3960      2.22  | Q       |         |         |         |
  2+30       0.4113      2.23  | Q       |         |         |         |
  2+35       0.4267      2.23  | Q       |         |         |         |
  2+40       0.4421      2.24  | Q       |         |         |         |
  2+45       0.4575      2.24  | Q       |         |         |         |
  2+50       0.4729      2.24  | Q       |         |         |         |
  2+55       0.4884      2.25  | QV      |         |         |         |
  3+ 0       0.5040      2.25  | QV      |         |         |         |
  3+ 5       0.5195      2.26  | QV      |         |         |         |
  3+10       0.5351      2.26  | QV      |         |         |         |
  3+15       0.5507      2.27  | QV      |         |         |         |
  3+20       0.5664      2.27  | QV      |         |         |         |
  3+25       0.5820      2.28  | QV      |         |         |         |
  3+30       0.5978      2.28  | QV      |         |         |         |
  3+35       0.6135      2.29  | QV      |         |         |         |
  3+40       0.6293      2.29  | QV      |         |         |         |
  3+45       0.6451      2.30  | Q V     |         |         |         |
  3+50       0.6610      2.30  | Q V     |         |         |         |
  3+55       0.6769      2.31  | Q V     |         |         |         |
  4+ 0       0.6928      2.31  | Q V     |         |         |         |
  4+ 5       0.7088      2.32  | Q V     |         |         |         |
  4+10       0.7248      2.32  | Q V     |         |         |         |
  4+15       0.7408      2.33  | Q V     |         |         |         |
  4+20       0.7569      2.33  | Q V     |         |         |         |
  4+25       0.7730      2.34  | Q V     |         |         |         |
  4+30       0.7891      2.34  | Q V     |         |         |         |
  4+35       0.8053      2.35  | Q  V    |         |         |         |
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 4+40      0.8215      2.36  | Q  V    |         |         |         |
 4+45      0.8378      2.36  | Q  V    |         |         |         |
 4+50      0.8541      2.37  | Q  V    |         |         |         |
 4+55      0.8704      2.37  | Q  V    |         |         |         |
 5+ 0      0.8868      2.38  | Q  V    |         |         |         |
 5+ 5      0.9032      2.38  | Q  V    |         |         |         |
 5+10      0.9197      2.39  | Q  V    |         |         |         |
 5+15      0.9362      2.40  | Q  V    |         |         |         |
 5+20      0.9527      2.40  | Q  V    |         |         |         |
 5+25      0.9693      2.41  | Q   V   |         |         |         |
 5+30      0.9859      2.41  | Q   V   |         |         |         |
 5+35      1.0026      2.42  | Q   V   |         |         |         |
 5+40      1.0193      2.43  | Q   V   |         |         |         |
 5+45      1.0360      2.43  | Q   V   |         |         |         |
 5+50      1.0528      2.44  | Q   V   |         |         |         |
 5+55      1.0697      2.45  | Q   V   |         |         |         |
 6+ 0      1.0866      2.45  | Q   V   |         |         |         |
 6+ 5      1.1035      2.46  | Q   V   |         |         |         |
 6+10      1.1205      2.46  | Q    V  |         |         |         |
 6+15      1.1375      2.47  | Q    V  |         |         |         |
 6+20      1.1546      2.48  | Q    V  |         |         |         |
 6+25      1.1717      2.49  | Q    V  |         |         |         |
 6+30      1.1888      2.49  | Q    V  |         |         |         |
 6+35      1.2061      2.50  | Q    V  |         |         |         |
 6+40      1.2233      2.51  | Q    V  |         |         |         |
 6+45      1.2406      2.51  | Q    V  |         |         |         |
 6+50      1.2580      2.52  | Q    V  |         |         |         |
 6+55      1.2754      2.53  | Q    V  |         |         |         |
 7+ 0      1.2929      2.54  | Q     V |         |         |         |
 7+ 5      1.3104      2.54  | Q     V |         |         |         |
 7+10      1.3279      2.55  | Q     V |         |         |         |
 7+15      1.3456      2.56  | Q     V |         |         |         |
 7+20      1.3632      2.57  | Q     V |         |         |         |
 7+25      1.3810      2.57  | Q     V |         |         |         |
 7+30      1.3988      2.58  | Q     V |         |         |         |
 7+35      1.4166      2.59  | Q     V |         |         |         |
 7+40      1.4345      2.60  | Q     V |         |         |         |
 7+45      1.4524      2.61  | Q      V|         |         |         |
 7+50      1.4705      2.62  | Q      V|         |         |         |
 7+55      1.4885      2.62  | Q      V|         |         |         |
 8+ 0      1.5067      2.63  | Q      V|         |         |         |
 8+ 5      1.5249      2.64  | Q      V|         |         |         |
 8+10      1.5431      2.65  | Q      V|         |         |         |
 8+15      1.5614      2.66  | Q      V|         |         |         |
 8+20      1.5798      2.67  | Q      V|         |         |         |
 8+25      1.5982      2.68  | Q      V|         |         |         |
 8+30      1.6167      2.69  | Q       V         |         |         |
 8+35      1.6353      2.70  | Q       V         |         |         |
 8+40      1.6539      2.71  | Q       V         |         |         |
 8+45      1.6727      2.72  | Q       V         |         |         |
 8+50      1.6914      2.73  | Q       V         |         |         |
 8+55      1.7103      2.74  | Q       V         |         |         |
 9+ 0      1.7292      2.75  | Q       V         |         |         |
 9+ 5      1.7482      2.76  | Q       V         |         |         |
 9+10      1.7672      2.77  | Q       |V        |         |         |
 9+15      1.7864      2.78  | Q       |V        |         |         |
 9+20      1.8056      2.79  | Q       |V        |         |         |
 9+25      1.8249      2.80  | Q       |V        |         |         |
 9+30      1.8442      2.81  | Q       |V        |         |         |
 9+35      1.8637      2.82  | Q       |V        |         |         |
 9+40      1.8832      2.83  | Q       |V        |         |         |
 9+45      1.9028      2.85  | Q       |V        |         |         |
 9+50      1.9225      2.86  | Q       | V       |         |         |
 9+55      1.9422      2.87  | Q       | V       |         |         |
10+ 0      1.9621      2.88  | Q       | V       |         |         |
10+ 5      1.9821      2.90  | Q       | V       |         |         |
10+10      2.0021      2.91  | Q       | V       |         |         |
10+15      2.0222      2.92  | Q       | V       |         |         |
10+20      2.0424      2.94  | Q       | V       |         |         |
10+25      2.0627      2.95  | Q       | V       |         |         |
10+30      2.0831      2.96  | Q       |  V      |         |         |
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10+35      2.1036     2.98  | Q       |  V      |         |         |
10+40      2.1242     2.99  | Q       |  V      |         |         |
10+45      2.1450     3.01  |  Q      |  V      |         |         |
10+50      2.1658     3.02  |  Q      |  V      |         |         |
10+55      2.1867     3.04  |  Q      |  V      |         |         |
11+ 0      2.2077     3.05  |  Q      |  V      |         |         |
11+ 5      2.2288     3.07  |  Q      |  V      |         |         |
11+10      2.2501     3.08  |  Q      |   V     |         |         |
11+15      2.2714     3.10  |  Q      |   V     |         |         |
11+20      2.2929     3.12  |  Q      |   V     |         |         |
11+25      2.3145     3.14  |  Q      |   V     |         |         |
11+30      2.3363     3.15  |  Q      |   V     |         |         |
11+35      2.3581     3.17  |  Q      |   V     |         |         |
11+40      2.3801     3.19  |  Q      |   V     |         |         |
11+45      2.4022     3.21  |  Q      |    V    |         |         |
11+50      2.4244     3.23  |  Q      |    V    |         |         |
11+55      2.4468     3.25  |  Q      |    V    |         |         |
12+ 0      2.4694     3.27  |  Q      |    V    |         |         |
12+ 5      2.4919     3.28  |  Q      |    V    |         |         |
12+10      2.5142     3.23  |  Q      |    V    |         |         |
12+15      2.5360     3.16  |  Q      |    V    |         |         |
12+20      2.5576     3.14  |  Q      |    V    |         |         |
12+25      2.5793     3.15  |  Q      |     V   |         |         |
12+30      2.6010     3.16  |  Q      |     V   |         |         |
12+35      2.6229     3.18  |  Q      |     V   |         |         |
12+40      2.6449     3.20  |  Q      |     V   |         |         |
12+45      2.6671     3.22  |  Q      |     V   |         |         |
12+50      2.6895     3.25  |  Q      |     V   |         |         |
12+55      2.7121     3.28  |  Q      |     V   |         |         |
13+ 0      2.7349     3.31  |  Q      |      V  |         |         |
13+ 5      2.7580     3.35  |  Q      |      V  |         |         |
13+10      2.7812     3.38  |  Q      |      V  |         |         |
13+15      2.8048     3.42  |  Q      |      V  |         |         |
13+20      2.8285     3.45  |  Q      |      V  |         |         |
13+25      2.8526     3.49  |  Q      |      V  |         |         |
13+30      2.8769     3.53  |  Q      |      V  |         |         |
13+35      2.9015     3.57  |  Q      |       V |         |         |
13+40      2.9264     3.62  |  Q      |       V |         |         |
13+45      2.9516     3.66  |  Q      |       V |         |         |
13+50      2.9772     3.71  |  Q      |       V |         |         |
13+55      3.0031     3.76  |  Q      |       V |         |         |
14+ 0      3.0293     3.81  |  Q      |       V |         |         |
14+ 5      3.0560     3.87  |  Q      |        V|         |         |
14+10      3.0830     3.93  |  Q      |        V|         |         |
14+15      3.1105     3.99  |  Q      |        V|         |         |
14+20      3.1384     4.05  |   Q     |        V|         |         |
14+25      3.1668     4.13  |   Q     |        V|         |         |
14+30      3.1957     4.20  |   Q     |        V|         |         |
14+35      3.2252     4.28  |   Q     |         V         |         |
14+40      3.2552     4.36  |   Q     |         V         |         |
14+45      3.2859     4.45  |   Q     |         V         |         |
14+50      3.3172     4.55  |   Q     |         V         |         |
14+55      3.3493     4.66  |   Q     |         V         |         |
15+ 0      3.3822     4.77  |   Q     |         |V        |         |
15+ 5      3.4159     4.90  |   Q     |         |V        |         |
15+10      3.4506     5.04  |    Q    |         |V        |         |
15+15      3.4864     5.20  |    Q    |         |V        |         |
15+20      3.5234     5.37  |    Q    |         | V       |         |
15+25      3.5608     5.43  |    Q    |         | V       |         |
15+30      3.5946     4.90  |   Q     |         | V       |         |
15+35      3.6221     4.00  |   Q     |         | V       |         |
15+40      3.6488     3.87  |  Q      |         | V       |         |
15+45      3.6765     4.03  |   Q     |         | V       |         |
15+50      3.7068     4.39  |   Q     |         |  V      |         |
15+55      3.7420     5.12  |    Q    |         |  V      |         |
16+ 0      3.7869     6.52  |     Q   |         |  V      |         |
16+ 5      3.8687    11.88  |         |Q        |   V     |         |
16+10      4.0461    25.75  |         |         |    Q    |         |
16+15      4.2741    33.11  |         |         |     V   |  Q      |
16+20      4.3854    16.15  |         |     Q   |      V  |         |
16+25      4.4609    10.96  |         |Q        |      V  |         |
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16+30       4.5211      8.74  |        Q |          |        V |          |
16+35       4.5749      7.82  |       Q  |          |        V |          |
16+40       4.6208      6.66  |      Q   |          |        V |          |
16+45       4.6601      5.70  |     Q    |          |         V|          |
16+50       4.6967      5.32  |     Q    |          |         V|          |
16+55       4.7314      5.03  |     Q    |          |         V|          |
17+ 0       4.7646      4.83  |    Q     |          |         V|          |
17+ 5       4.7957      4.52  |    Q     |          |         V|          |
17+10       4.8251      4.27  |    Q     |          |          V          |
17+15       4.8532      4.07  |    Q     |          |          V          |
17+20       4.8803      3.95  |   Q      |          |          V          |
17+25       4.9067      3.83  |   Q      |          |          V          |
17+30       4.9324      3.73  |   Q      |          |          V          |
17+35       4.9574      3.63  |   Q      |          |          |V         |
17+40       4.9818      3.54  |   Q      |          |          |V         |
17+45       5.0057      3.46  |   Q      |          |          |V         |
17+50       5.0290      3.39  |   Q      |          |          |V         |
17+55       5.0519      3.32  |   Q      |          |          |V         |
18+ 0       5.0743      3.26  |   Q      |          |          |V         |
18+ 5       5.0964      3.21  |   Q      |          |          |V         |
18+10       5.1186      3.22  |   Q      |          |          | V        |
18+15       5.1411      3.27  |   Q      |          |          | V        |
18+20       5.1636      3.26  |   Q      |          |          | V        |
18+25       5.1859      3.24  |   Q      |          |          | V        |
18+30       5.2081      3.21  |   Q      |          |          | V        |
18+35       5.2300      3.18  |   Q      |          |          | V        |
18+40       5.2517      3.15  |   Q      |          |          | V        |
18+45       5.2732      3.12  |   Q      |          |          | V        |
18+50       5.2944      3.08  |   Q      |          |          |  V       |
18+55       5.3154      3.05  |   Q      |          |          |  V       |
19+ 0       5.3363      3.02  |   Q      |          |          |  V       |
19+ 5       5.3569      2.99  | Q        |          |          |  V       |
19+10       5.3773      2.96  | Q        |          |          |  V       |
19+15       5.3975      2.94  | Q        |          |          |  V       |
19+20       5.4176      2.91  | Q        |          |          |  V       |
19+25       5.4374      2.88  | Q        |          |          |   V      |
19+30       5.4571      2.86  | Q        |          |          |   V      |
19+35       5.4767      2.84  | Q        |          |          |   V      |
19+40       5.4960      2.81  | Q        |          |          |   V      |
19+45       5.5153      2.79  | Q        |          |          |   V      |
19+50       5.5343      2.77  | Q        |          |          |   V      |
19+55       5.5532      2.75  | Q        |          |          |   V      |
20+ 0       5.5720      2.73  | Q        |          |          |   V      |
20+ 5       5.5907      2.71  | Q        |          |          |   V      |
20+10       5.6092      2.69  | Q        |          |          |    V     |
20+15       5.6276      2.67  | Q        |          |          |    V     |
20+20       5.6458      2.65  | Q        |          |          |    V     |
20+25       5.6640      2.63  | Q        |          |          |    V     |
20+30       5.6820      2.62  | Q        |          |          |    V     |
20+35       5.6999      2.60  | Q        |          |          |    V     |
20+40       5.7177      2.58  | Q        |          |          |    V     |
20+45       5.7353      2.57  | Q        |          |          |    V     |
20+50       5.7529      2.55  | Q        |          |          |    V     |
20+55       5.7704      2.54  | Q        |          |          |     V    |
21+ 0       5.7877      2.52  | Q        |          |          |     V    |
21+ 5       5.8050      2.51  | Q        |          |          |     V    |
21+10       5.8222      2.49  | Q        |          |          |     V    |
21+15       5.8392      2.48  | Q        |          |          |     V    |
21+20       5.8562      2.47  | Q        |          |          |     V    |
21+25       5.8731      2.45  | Q        |          |          |     V    |
21+30       5.8899      2.44  | Q        |          |          |     V    |
21+35       5.9066      2.43  | Q        |          |          |     V    |
21+40       5.9233      2.41  | Q        |          |          |      V   |
21+45       5.9398      2.40  | Q        |          |          |      V   |
21+50       5.9563      2.39  | Q        |          |          |      V   |
21+55       5.9726      2.38  | Q        |          |          |      V   |
22+ 0       5.9889      2.37  | Q        |          |          |      V   |
22+ 5       6.0052      2.36  | Q        |          |          |      V   |
22+10       6.0213      2.34  | Q        |          |          |      V   |
22+15       6.0374      2.33  | Q        |          |          |      V   |
22+20       6.0534      2.32  | Q        |          |          |      V   |
```

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   22+25       6.0693      2.31  | Q       |         |         |      V  |
   22+30       6.0852      2.30  | Q       |         |         |       V |
   22+35       6.1010      2.29  | Q       |         |         |       V |
   22+40       6.1167      2.28  | Q       |         |         |       V |
   22+45       6.1323      2.27  | Q       |         |         |       V |
   22+50       6.1479      2.26  | Q       |         |         |       V |
   22+55       6.1634      2.25  | Q       |         |         |       V |
   23+ 0       6.1789      2.24  | Q       |         |         |       V |
   23+ 5       6.1943      2.24  | Q       |         |         |       V |
   23+10       6.2096      2.23  | Q       |         |         |       V |
   23+15       6.2249      2.22  | Q       |         |         |       V |
   23+20       6.2401      2.21  | Q       |         |         |        V|
   23+25       6.2553      2.20  | Q       |         |         |        V|
   23+30       6.2704      2.19  | Q       |         |         |        V|
   23+35       6.2854      2.18  | Q       |         |         |        V|
   23+40       6.3004      2.18  | Q       |         |         |        V|
   23+45       6.3153      2.17  | Q       |         |         |        V|
   23+50       6.3302      2.16  | Q       |         |         |        V|
   23+55       6.3450      2.15  | Q       |         |         |        V|
   24+ 0       6.3598      2.14  | Q       |         |         |        V|
   24+ 5       6.3738      2.04  | Q       |         |         |        V|
   24+10       6.3843      1.52  |Q        |         |         |        V|
   24+15       6.3893      0.73  Q         |         |         |        V|
   24+20       6.3923      0.43  Q         |         |         |        V|
   24+25       6.3942      0.26  Q         |         |         |        V|
   24+30       6.3952      0.16  Q         |         |         |        V|
   24+35       6.3958      0.09  Q         |         |         |        V|
   24+40       6.3961      0.05  Q         |         |         |        V|
   24+45       6.3964      0.03  Q         |         |         |        V|
   24+50       6.3965      0.02  Q         |         |         |        V|
   24+55       6.3966      0.01  Q         |         |         |        V|
   25+ 0       6.3966      0.01  Q         |         |         |        V|
   25+ 5       6.3966      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'B' – 100 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

                Study date  12/16/24

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San Bernardino County Synthetic Unit Hydrology Method
                Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'B'
100 YEAR 24 HOUR STORM
DECEMBER 16, 2024
------------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
            11.61            1           1.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61            6           2.00
------------------------------------------------------------------------
Rainfall data for year 2
            11.61           24           4.00
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            1           1.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61            6           4.50
------------------------------------------------------------------------
Rainfall data for year 100
            11.61           24          12.00
------------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 78.0      92.8         11.61      1.000     0.140    1.000    0.140

Area-averaged adjusted loss rate Fm (In/Hr) =  0.140

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
11.61	1.000	78.0	92.8	0.78	0.926

Area-averaged catchment yield fraction, Y = 0.926
Area-averaged low loss fraction, Yb = 0.074
User entry of time of concentration = 0.193 (hours)
++
Watershed area = 11.61(Ac.)
Catchment Lag time = 0.155 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 53.8886
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.140(In/Hr)
Average low loss rate fraction (Yb) = 0.074 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 11.61(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.711(In)
30-minute factor = 0.999 Adjusted rainfall = 1.218(In)
1-hour factor = 0.999 Adjusted rainfall = 1.499(In)
3-hour factor = 1.000 Adjusted rainfall = 2.942(In)
6-hour factor = 1.000 Adjusted rainfall = 4.500(In)
24-hour factor = 1.000 Adjusted rainfall = 12.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 140.41 (CFS))	
1	4.766	6.692
2	29.591	34.856
3	66.533	51.869
4	80.129	19.090
5	87.996	11.046
6	93.026	7.062
7	96.157	4.397
8	97.873	2.409
9	98.574	0.984
10	99.063	0.687
11	99.429	0.513
12	99.777	0.489
13	100.000	0.313

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7114	0.7114
2	0.8758	0.1644
3	0.9891	0.1133
4	1.0782	0.0892
5	1.1529	0.0747
6	1.2177	0.0648
7	1.2754	0.0576
8	1.3275	0.0521
9	1.3752	0.0477
10	1.4194	0.0442
11	1.4606	0.0412
12	1.4992	0.0386
13	1.5747	0.0755

14	1.6479	0.0733
15	1.7192	0.0713
16	1.7886	0.0694
17	1.8564	0.0678
18	1.9227	0.0663
19	1.9875	0.0649
20	2.0511	0.0635
21	2.1134	0.0623
22	2.1746	0.0612
23	2.2347	0.0601
24	2.2938	0.0591
25	2.3520	0.0582
26	2.4093	0.0573
27	2.4657	0.0564
28	2.5214	0.0556
29	2.5763	0.0549
30	2.6304	0.0542
31	2.6839	0.0535
32	2.7367	0.0528
33	2.7888	0.0522
34	2.8404	0.0516
35	2.8913	0.0510
36	2.9418	0.0504
37	2.9916	0.0498
38	3.0409	0.0493
39	3.0897	0.0488
40	3.1381	0.0483
41	3.1860	0.0479
42	3.2334	0.0474
43	3.2804	0.0470
44	3.3270	0.0466
45	3.3731	0.0462
46	3.4189	0.0458
47	3.4643	0.0454
48	3.5093	0.0450
49	3.5539	0.0447
50	3.5982	0.0443
51	3.6422	0.0440
52	3.6858	0.0436
53	3.7291	0.0433
54	3.7721	0.0430
55	3.8148	0.0427
56	3.8572	0.0424
57	3.8993	0.0421
58	3.9411	0.0418
59	3.9826	0.0415
60	4.0239	0.0413
61	4.0649	0.0410
62	4.1056	0.0407
63	4.1461	0.0405
64	4.1863	0.0402
65	4.2263	0.0400
66	4.2660	0.0398
67	4.3056	0.0395
68	4.3449	0.0393
69	4.3839	0.0391
70	4.4228	0.0389
71	4.4614	0.0386
72	4.4998	0.0384
73	4.5440	0.0441
74	4.5879	0.0440
75	4.6317	0.0438
76	4.6753	0.0436
77	4.7188	0.0434
78	4.7620	0.0433
79	4.8051	0.0431
80	4.8481	0.0430
81	4.8909	0.0428
82	4.9335	0.0426
83	4.9760	0.0425
84	5.0184	0.0423

85	5.0606	0.0422
86	5.1026	0.0421
87	5.1445	0.0419
88	5.1863	0.0418
89	5.2279	0.0416
90	5.2694	0.0415
91	5.3108	0.0414
92	5.3520	0.0412
93	5.3931	0.0411
94	5.4341	0.0410
95	5.4749	0.0408
96	5.5156	0.0407
97	5.5562	0.0406
98	5.5967	0.0405
99	5.6370	0.0403
100	5.6773	0.0402
101	5.7174	0.0401
102	5.7574	0.0400
103	5.7972	0.0399
104	5.8370	0.0398
105	5.8767	0.0397
106	5.9162	0.0395
107	5.9556	0.0394
108	5.9950	0.0393
109	6.0342	0.0392
110	6.0733	0.0391
111	6.1123	0.0390
112	6.1512	0.0389
113	6.1900	0.0388
114	6.2288	0.0387
115	6.2674	0.0386
116	6.3059	0.0385
117	6.3443	0.0384
118	6.3826	0.0383
119	6.4208	0.0382
120	6.4590	0.0381
121	6.4970	0.0380
122	6.5349	0.0379
123	6.5728	0.0379
124	6.6106	0.0378
125	6.6482	0.0377
126	6.6858	0.0376
127	6.7233	0.0375
128	6.7607	0.0374
129	6.7981	0.0373
130	6.8353	0.0372
131	6.8725	0.0372
132	6.9095	0.0371
133	6.9465	0.0370
134	6.9834	0.0369
135	7.0203	0.0368
136	7.0570	0.0368
137	7.0937	0.0367
138	7.1303	0.0366
139	7.1668	0.0365
140	7.2033	0.0364
141	7.2396	0.0364
142	7.2759	0.0363
143	7.3121	0.0362
144	7.3483	0.0361
145	7.3844	0.0361
146	7.4203	0.0360
147	7.4563	0.0359
148	7.4921	0.0359
149	7.5279	0.0358
150	7.5636	0.0357
151	7.5993	0.0356
152	7.6348	0.0356
153	7.6703	0.0355
154	7.7058	0.0354
155	7.7411	0.0354

156	7.7764	0.0353
157	7.8117	0.0352
158	7.8469	0.0352
159	7.8820	0.0351
160	7.9170	0.0350
161	7.9520	0.0350
162	7.9869	0.0349
163	8.0217	0.0349
164	8.0565	0.0348
165	8.0913	0.0347
166	8.1259	0.0347
167	8.1605	0.0346
168	8.1951	0.0345
169	8.2296	0.0345
170	8.2640	0.0344
171	8.2983	0.0344
172	8.3327	0.0343
173	8.3669	0.0342
174	8.4011	0.0342
175	8.4352	0.0341
176	8.4693	0.0341
177	8.5033	0.0340
178	8.5373	0.0340
179	8.5712	0.0339
180	8.6050	0.0339
181	8.6388	0.0338
182	8.6726	0.0337
183	8.7063	0.0337
184	8.7399	0.0336
185	8.7735	0.0336
186	8.8070	0.0335
187	8.8405	0.0335
188	8.8739	0.0334
189	8.9073	0.0334
190	8.9406	0.0333
191	8.9739	0.0333
192	9.0071	0.0332
193	9.0403	0.0332
194	9.0734	0.0331
195	9.1064	0.0331
196	9.1395	0.0330
197	9.1724	0.0330
198	9.2053	0.0329
199	9.2382	0.0329
200	9.2710	0.0328
201	9.3038	0.0328
202	9.3365	0.0327
203	9.3692	0.0327
204	9.4018	0.0326
205	9.4344	0.0326
206	9.4670	0.0325
207	9.4995	0.0325
208	9.5319	0.0324
209	9.5643	0.0324
210	9.5967	0.0324
211	9.6290	0.0323
212	9.6612	0.0323
213	9.6935	0.0322
214	9.7256	0.0322
215	9.7578	0.0321
216	9.7899	0.0321
217	9.8219	0.0320
218	9.8539	0.0320
219	9.8859	0.0320
220	9.9178	0.0319
221	9.9497	0.0319
222	9.9815	0.0318
223	10.0133	0.0318
224	10.0450	0.0317
225	10.0767	0.0317
226	10.1084	0.0317

227	10.1400	0.0316
228	10.1716	0.0316
229	10.2032	0.0315
230	10.2347	0.0315
231	10.2661	0.0315
232	10.2976	0.0314
233	10.3289	0.0314
234	10.3603	0.0313
235	10.3916	0.0313
236	10.4229	0.0313
237	10.4541	0.0312
238	10.4853	0.0312
239	10.5164	0.0312
240	10.5475	0.0311
241	10.5786	0.0311
242	10.6097	0.0310
243	10.6407	0.0310
244	10.6716	0.0310
245	10.7026	0.0309
246	10.7334	0.0309
247	10.7643	0.0309
248	10.7951	0.0308
249	10.8259	0.0308
250	10.8566	0.0307
251	10.8873	0.0307
252	10.9180	0.0307
253	10.9487	0.0306
254	10.9793	0.0306
255	11.0098	0.0306
256	11.0403	0.0305
257	11.0708	0.0305
258	11.1013	0.0305
259	11.1317	0.0304
260	11.1621	0.0304
261	11.1925	0.0304
262	11.2228	0.0303
263	11.2531	0.0303
264	11.2834	0.0303
265	11.3136	0.0302
266	11.3438	0.0302
267	11.3739	0.0302
268	11.4040	0.0301
269	11.4341	0.0301
270	11.4642	0.0301
271	11.4942	0.0300
272	11.5242	0.0300
273	11.5542	0.0300
274	11.5841	0.0299
275	11.6140	0.0299
276	11.6439	0.0299
277	11.6737	0.0298
278	11.7035	0.0298
279	11.7333	0.0298
280	11.7630	0.0297
281	11.7927	0.0297
282	11.8224	0.0297
283	11.8520	0.0296
284	11.8817	0.0296
285	11.9113	0.0296
286	11.9408	0.0296
287	11.9703	0.0295
288	11.9998	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0022	0.0273
2	0.0295	0.0022	0.0274
3	0.0296	0.0022	0.0274
4	0.0296	0.0022	0.0274

5	0.0297	0.0022	0.0275
6	0.0297	0.0022	0.0275
7	0.0298	0.0022	0.0276
8	0.0298	0.0022	0.0276
9	0.0299	0.0022	0.0277
10	0.0299	0.0022	0.0277
11	0.0300	0.0022	0.0278
12	0.0300	0.0022	0.0278
13	0.0301	0.0022	0.0278
14	0.0301	0.0022	0.0279
15	0.0302	0.0022	0.0279
16	0.0302	0.0022	0.0280
17	0.0303	0.0022	0.0280
18	0.0303	0.0022	0.0281
19	0.0304	0.0022	0.0281
20	0.0304	0.0022	0.0282
21	0.0305	0.0022	0.0282
22	0.0305	0.0022	0.0283
23	0.0306	0.0023	0.0283
24	0.0306	0.0023	0.0283
25	0.0307	0.0023	0.0284
26	0.0307	0.0023	0.0284
27	0.0308	0.0023	0.0285
28	0.0308	0.0023	0.0285
29	0.0309	0.0023	0.0286
30	0.0309	0.0023	0.0286
31	0.0310	0.0023	0.0287
32	0.0310	0.0023	0.0288
33	0.0311	0.0023	0.0288
34	0.0312	0.0023	0.0289
35	0.0312	0.0023	0.0289
36	0.0313	0.0023	0.0290
37	0.0313	0.0023	0.0290
38	0.0314	0.0023	0.0291
39	0.0315	0.0023	0.0291
40	0.0315	0.0023	0.0292
41	0.0316	0.0023	0.0293
42	0.0316	0.0023	0.0293
43	0.0317	0.0023	0.0294
44	0.0317	0.0023	0.0294
45	0.0318	0.0023	0.0295
46	0.0319	0.0023	0.0295
47	0.0320	0.0024	0.0296
48	0.0320	0.0024	0.0296
49	0.0321	0.0024	0.0297
50	0.0321	0.0024	0.0298
51	0.0322	0.0024	0.0298
52	0.0323	0.0024	0.0299
53	0.0324	0.0024	0.0300
54	0.0324	0.0024	0.0300
55	0.0325	0.0024	0.0301
56	0.0325	0.0024	0.0301
57	0.0326	0.0024	0.0302
58	0.0327	0.0024	0.0303
59	0.0328	0.0024	0.0304
60	0.0328	0.0024	0.0304
61	0.0329	0.0024	0.0305
62	0.0330	0.0024	0.0305
63	0.0331	0.0024	0.0306
64	0.0331	0.0024	0.0307
65	0.0332	0.0024	0.0308
66	0.0333	0.0024	0.0308
67	0.0334	0.0025	0.0309
68	0.0334	0.0025	0.0310
69	0.0335	0.0025	0.0311
70	0.0336	0.0025	0.0311
71	0.0337	0.0025	0.0312
72	0.0337	0.0025	0.0313
73	0.0339	0.0025	0.0314
74	0.0339	0.0025	0.0314
75	0.0340	0.0025	0.0315

76	0.0341	0.0025	0.0316
77	0.0342	0.0025	0.0317
78	0.0342	0.0025	0.0317
79	0.0344	0.0025	0.0318
80	0.0344	0.0025	0.0319
81	0.0345	0.0025	0.0320
82	0.0346	0.0025	0.0321
83	0.0347	0.0026	0.0322
84	0.0348	0.0026	0.0322
85	0.0349	0.0026	0.0323
86	0.0350	0.0026	0.0324
87	0.0351	0.0026	0.0325
88	0.0352	0.0026	0.0326
89	0.0353	0.0026	0.0327
90	0.0354	0.0026	0.0328
91	0.0355	0.0026	0.0329
92	0.0356	0.0026	0.0330
93	0.0357	0.0026	0.0331
94	0.0358	0.0026	0.0331
95	0.0359	0.0026	0.0333
96	0.0360	0.0026	0.0333
97	0.0361	0.0027	0.0335
98	0.0362	0.0027	0.0336
99	0.0364	0.0027	0.0337
100	0.0364	0.0027	0.0338
101	0.0366	0.0027	0.0339
102	0.0367	0.0027	0.0340
103	0.0368	0.0027	0.0341
104	0.0369	0.0027	0.0342
105	0.0371	0.0027	0.0343
106	0.0372	0.0027	0.0344
107	0.0373	0.0027	0.0346
108	0.0374	0.0028	0.0347
109	0.0376	0.0028	0.0348
110	0.0377	0.0028	0.0349
111	0.0379	0.0028	0.0351
112	0.0379	0.0028	0.0352
113	0.0381	0.0028	0.0353
114	0.0382	0.0028	0.0354
115	0.0384	0.0028	0.0356
116	0.0385	0.0028	0.0357
117	0.0387	0.0028	0.0359
118	0.0388	0.0029	0.0360
119	0.0390	0.0029	0.0361
120	0.0391	0.0029	0.0362
121	0.0393	0.0029	0.0364
122	0.0394	0.0029	0.0365
123	0.0397	0.0029	0.0367
124	0.0398	0.0029	0.0368
125	0.0400	0.0029	0.0371
126	0.0401	0.0030	0.0372
127	0.0403	0.0030	0.0374
128	0.0405	0.0030	0.0375
129	0.0407	0.0030	0.0377
130	0.0408	0.0030	0.0378
131	0.0411	0.0030	0.0381
132	0.0412	0.0030	0.0382
133	0.0415	0.0031	0.0384
134	0.0416	0.0031	0.0386
135	0.0419	0.0031	0.0388
136	0.0421	0.0031	0.0390
137	0.0423	0.0031	0.0392
138	0.0425	0.0031	0.0394
139	0.0428	0.0032	0.0396
140	0.0430	0.0032	0.0398
141	0.0433	0.0032	0.0401
142	0.0434	0.0032	0.0402
143	0.0438	0.0032	0.0406
144	0.0440	0.0032	0.0407
145	0.0384	0.0028	0.0356
146	0.0386	0.0028	0.0358

147	0.0391	0.0029	0.0362
148	0.0393	0.0029	0.0364
149	0.0398	0.0029	0.0368
150	0.0400	0.0029	0.0370
151	0.0405	0.0030	0.0375
152	0.0407	0.0030	0.0377
153	0.0413	0.0030	0.0382
154	0.0415	0.0031	0.0385
155	0.0421	0.0031	0.0390
156	0.0424	0.0031	0.0393
157	0.0430	0.0032	0.0398
158	0.0433	0.0032	0.0401
159	0.0440	0.0032	0.0407
160	0.0443	0.0033	0.0410
161	0.0450	0.0033	0.0417
162	0.0454	0.0033	0.0420
163	0.0462	0.0034	0.0428
164	0.0466	0.0034	0.0431
165	0.0474	0.0035	0.0439
166	0.0479	0.0035	0.0444
167	0.0488	0.0036	0.0452
168	0.0493	0.0036	0.0457
169	0.0504	0.0037	0.0467
170	0.0510	0.0038	0.0472
171	0.0522	0.0038	0.0483
172	0.0528	0.0039	0.0489
173	0.0542	0.0040	0.0502
174	0.0549	0.0040	0.0508
175	0.0564	0.0042	0.0523
176	0.0573	0.0042	0.0531
177	0.0591	0.0044	0.0548
178	0.0601	0.0044	0.0557
179	0.0623	0.0046	0.0577
180	0.0635	0.0047	0.0589
181	0.0663	0.0049	0.0614
182	0.0678	0.0050	0.0628
183	0.0713	0.0052	0.0660
184	0.0733	0.0054	0.0679
185	0.0386	0.0028	0.0358
186	0.0412	0.0030	0.0381
187	0.0477	0.0035	0.0442
188	0.0521	0.0038	0.0483
189	0.0648	0.0048	0.0600
190	0.0747	0.0055	0.0692
191	0.1133	0.0083	0.1049
192	0.1644	0.0117	0.1528
193	0.7114	0.0117	0.6997
194	0.0892	0.0066	0.0826
195	0.0576	0.0042	0.0534
196	0.0442	0.0033	0.0409
197	0.0755	0.0056	0.0699
198	0.0694	0.0051	0.0643
199	0.0649	0.0048	0.0601
200	0.0612	0.0045	0.0567
201	0.0582	0.0043	0.0539
202	0.0556	0.0041	0.0515
203	0.0535	0.0039	0.0495
204	0.0516	0.0038	0.0478
205	0.0498	0.0037	0.0462
206	0.0483	0.0036	0.0448
207	0.0470	0.0035	0.0435
208	0.0458	0.0034	0.0424
209	0.0447	0.0033	0.0414
210	0.0436	0.0032	0.0404
211	0.0427	0.0031	0.0395
212	0.0418	0.0031	0.0387
213	0.0410	0.0030	0.0380
214	0.0402	0.0030	0.0373
215	0.0395	0.0029	0.0366
216	0.0389	0.0029	0.0360
217	0.0441	0.0032	0.0409

218	0.0436	0.0032	0.0404
219	0.0431	0.0032	0.0399
220	0.0426	0.0031	0.0395
221	0.0422	0.0031	0.0391
222	0.0418	0.0031	0.0387
223	0.0414	0.0030	0.0383
224	0.0410	0.0030	0.0380
225	0.0406	0.0030	0.0376
226	0.0402	0.0030	0.0373
227	0.0399	0.0029	0.0369
228	0.0395	0.0029	0.0366
229	0.0392	0.0029	0.0363
230	0.0389	0.0029	0.0360
231	0.0386	0.0028	0.0358
232	0.0383	0.0028	0.0355
233	0.0380	0.0028	0.0352
234	0.0378	0.0028	0.0350
235	0.0375	0.0028	0.0347
236	0.0372	0.0027	0.0345
237	0.0370	0.0027	0.0343
238	0.0368	0.0027	0.0340
239	0.0365	0.0027	0.0338
240	0.0363	0.0027	0.0336
241	0.0361	0.0027	0.0334
242	0.0359	0.0026	0.0332
243	0.0356	0.0026	0.0330
244	0.0354	0.0026	0.0328
245	0.0352	0.0026	0.0326
246	0.0350	0.0026	0.0325
247	0.0349	0.0026	0.0323
248	0.0347	0.0026	0.0321
249	0.0345	0.0025	0.0319
250	0.0343	0.0025	0.0318
251	0.0341	0.0025	0.0316
252	0.0340	0.0025	0.0315
253	0.0338	0.0025	0.0313
254	0.0336	0.0025	0.0312
255	0.0335	0.0025	0.0310
256	0.0333	0.0025	0.0309
257	0.0332	0.0024	0.0307
258	0.0330	0.0024	0.0306
259	0.0329	0.0024	0.0305
260	0.0327	0.0024	0.0303
261	0.0326	0.0024	0.0302
262	0.0324	0.0024	0.0301
263	0.0323	0.0024	0.0299
264	0.0322	0.0024	0.0298
265	0.0320	0.0024	0.0297
266	0.0319	0.0023	0.0296
267	0.0318	0.0023	0.0295
268	0.0317	0.0023	0.0293
269	0.0315	0.0023	0.0292
270	0.0314	0.0023	0.0291
271	0.0313	0.0023	0.0290
272	0.0312	0.0023	0.0289
273	0.0311	0.0023	0.0288
274	0.0310	0.0023	0.0287
275	0.0309	0.0023	0.0286
276	0.0307	0.0023	0.0285
277	0.0306	0.0023	0.0284
278	0.0305	0.0022	0.0283
279	0.0304	0.0022	0.0282
280	0.0303	0.0022	0.0281
281	0.0302	0.0022	0.0280
282	0.0301	0.0022	0.0279
283	0.0300	0.0022	0.0278
284	0.0299	0.0022	0.0277
285	0.0298	0.0022	0.0276
286	0.0297	0.0022	0.0276
287	0.0296	0.0022	0.0275
288	0.0296	0.0022	0.0274

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      ----------------------------------------------------------------------
      ----------------------------------------------------------------------
      Total soil rain loss =      0.84(In)
      Total effective rainfall =     11.16(In)
      Peak flow rate in flood hydrograph =     44.62(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       12.5      25.0      37.5      50.0
----------------------------------------------------------------------------
  0+ 5       0.0013      0.18  Q         |         |         |         |
  0+10       0.0091      1.14  Q         |         |         |         |
  0+15       0.0267      2.55  V Q       |         |         |         |
  0+20       0.0479      3.08  V Q       |         |         |         |
  0+25       0.0712      3.39  V Q       |         |         |         |
  0+30       0.0959      3.58  V Q       |         |         |         |
  0+35       0.1214      3.71  V Q       |         |         |         |
  0+40       0.1475      3.78  V  Q      |         |         |         |
  0+45       0.1737      3.81  V  Q      |         |         |         |
  0+50       0.2002      3.84  V  Q      |         |         |         |
  0+55       0.2268      3.86  V  Q      |         |         |         |
  1+ 0       0.2535      3.88  V  Q      |         |         |         |
  1+ 5       0.2803      3.89  |V Q      |         |         |         |
  1+10       0.3071      3.90  |V Q      |         |         |         |
  1+15       0.3340      3.91  |V Q      |         |         |         |
  1+20       0.3610      3.91  |V Q      |         |         |         |
  1+25       0.3880      3.92  |V Q      |         |         |         |
  1+30       0.4150      3.92  |V Q      |         |         |         |
  1+35       0.4421      3.93  |V Q      |         |         |         |
  1+40       0.4692      3.94  |V Q      |         |         |         |
  1+45       0.4964      3.94  |V Q      |         |         |         |
  1+50       0.5236      3.95  |V Q      |         |         |         |
  1+55       0.5508      3.96  | VQ      |         |         |         |
  2+ 0       0.5781      3.96  | VQ      |         |         |         |
  2+ 5       0.6055      3.97  | VQ      |         |         |         |
  2+10       0.6329      3.98  | VQ      |         |         |         |
  2+15       0.6603      3.99  | VQ      |         |         |         |
  2+20       0.6878      3.99  | VQ      |         |         |         |
  2+25       0.7154      4.00  | VQ      |         |         |         |
  2+30       0.7430      4.01  | VQ      |         |         |         |
  2+35       0.7706      4.01  | VQ      |         |         |         |
  2+40       0.7983      4.02  | VQ      |         |         |         |
  2+45       0.8260      4.03  |  Q      |         |         |         |
  2+50       0.8538      4.03  |  Q      |         |         |         |
  2+55       0.8817      4.04  |  Q      |         |         |         |
  3+ 0       0.9096      4.05  |  Q      |         |         |         |
  3+ 5       0.9375      4.06  |  Q      |         |         |         |
  3+10       0.9655      4.06  |  Q      |         |         |         |
  3+15       0.9935      4.07  |  Q      |         |         |         |
  3+20       1.0216      4.08  |  Q      |         |         |         |
  3+25       1.0498      4.09  |  Q      |         |         |         |
  3+30       1.0780      4.10  |  Q      |         |         |         |
  3+35       1.1063      4.10  |  QV     |         |         |         |
  3+40       1.1346      4.11  |  QV     |         |         |         |
  3+45       1.1629      4.12  |  QV     |         |         |         |
  3+50       1.1914      4.13  |  QV     |         |         |         |
  3+55       1.2198      4.14  |  QV     |         |         |         |
  4+ 0       1.2484      4.14  |  QV     |         |         |         |
  4+ 5       1.2770      4.15  |  QV     |         |         |         |
  4+10       1.3056      4.16  |  QV     |         |         |         |
  4+15       1.3343      4.17  |  QV     |         |         |         |
  4+20       1.3631      4.18  |  Q V    |         |         |         |
  4+25       1.3919      4.19  |  Q V    |         |         |         |
  4+30       1.4208      4.19  |  Q V    |         |         |         |
  4+35       1.4498      4.20  |  Q V    |         |         |         |
  4+40       1.4788      4.21  |  Q V    |         |         |         |
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 4+45      1.5079      4.22  |  Q V    |         |         |         |
 4+50      1.5370      4.23  |  Q V    |         |         |         |
 4+55      1.5662      4.24  |  Q V    |         |         |         |
 5+ 0      1.5954      4.25  |  Q V    |         |         |         |
 5+ 5      1.6248      4.26  |  Q  V   |         |         |         |
 5+10      1.6541      4.27  |  Q  V   |         |         |         |
 5+15      1.6836      4.28  |  Q  V   |         |         |         |
 5+20      1.7131      4.29  |  Q  V   |         |         |         |
 5+25      1.7427      4.30  |  Q  V   |         |         |         |
 5+30      1.7723      4.30  |  Q  V   |         |         |         |
 5+35      1.8020      4.31  |  Q  V   |         |         |         |
 5+40      1.8318      4.32  |  Q  V   |         |         |         |
 5+45      1.8617      4.33  |  Q  V   |         |         |         |
 5+50      1.8916      4.34  |  Q   V  |         |         |         |
 5+55      1.9216      4.35  |  Q   V  |         |         |         |
 6+ 0      1.9516      4.36  |  Q   V  |         |         |         |
 6+ 5      1.9818      4.38  |  Q   V  |         |         |         |
 6+10      2.0120      4.39  |  Q   V  |         |         |         |
 6+15      2.0423      4.40  |  Q   V  |         |         |         |
 6+20      2.0726      4.41  |  Q   V  |         |         |         |
 6+25      2.1030      4.42  |  Q   V  |         |         |         |
 6+30      2.1335      4.43  |  Q   V  |         |         |         |
 6+35      2.1641      4.44  |  Q    V |         |         |         |
 6+40      2.1948      4.45  |  Q    V |         |         |         |
 6+45      2.2255      4.46  |  Q    V |         |         |         |
 6+50      2.2563      4.47  |  Q    V |         |         |         |
 6+55      2.2872      4.49  |  Q    V |         |         |         |
 7+ 0      2.3182      4.50  |  Q    V |         |         |         |
 7+ 5      2.3493      4.51  |  Q    V |         |         |         |
 7+10      2.3804      4.52  |  Q    V |         |         |         |
 7+15      2.4116      4.53  |  Q    V |         |         |         |
 7+20      2.4429      4.55  |  Q     V|         |         |         |
 7+25      2.4743      4.56  |  Q     V|         |         |         |
 7+30      2.5058      4.57  |  Q     V|         |         |         |
 7+35      2.5374      4.58  |  Q     V|         |         |         |
 7+40      2.5690      4.60  |  Q     V|         |         |         |
 7+45      2.6008      4.61  |  Q     V|         |         |         |
 7+50      2.6326      4.62  |  Q     V|         |         |         |
 7+55      2.6646      4.64  |  Q     V|         |         |         |
 8+ 0      2.6966      4.65  |  Q     V|         |         |         |
 8+ 5      2.7287      4.66  |  Q      V         |         |         |
 8+10      2.7609      4.68  |  Q      V         |         |         |
 8+15      2.7933      4.69  |  Q      V         |         |         |
 8+20      2.8257      4.71  |  Q      V         |         |         |
 8+25      2.8582      4.72  |  Q      V         |         |         |
 8+30      2.8908      4.74  |  Q      V         |         |         |
 8+35      2.9235      4.75  |  Q      V         |         |         |
 8+40      2.9563      4.77  |  Q      V         |         |         |
 8+45      2.9893      4.78  |  Q       |V       |         |         |
 8+50      3.0223      4.80  |  Q       |V       |         |         |
 8+55      3.0555      4.81  |  Q       |V       |         |         |
 9+ 0      3.0887      4.83  |  Q       |V       |         |         |
 9+ 5      3.1221      4.85  |  Q       |V       |         |         |
 9+10      3.1556      4.86  |  Q       |V       |         |         |
 9+15      3.1892      4.88  |  Q       |V       |         |         |
 9+20      3.2229      4.90  |  Q       |V       |         |         |
 9+25      3.2567      4.91  |  Q       | V      |         |         |
 9+30      3.2907      4.93  |  Q       | V      |         |         |
 9+35      3.3248      4.95  |  Q       | V      |         |         |
 9+40      3.3590      4.97  |  Q       | V      |         |         |
 9+45      3.3933      4.99  |  Q       | V      |         |         |
 9+50      3.4278      5.00  |   Q      | V      |         |         |
 9+55      3.4624      5.02  |   Q      | V      |         |         |
10+ 0      3.4971      5.04  |   Q      | V      |         |         |
10+ 5      3.5319      5.06  |   Q      |  V     |         |         |
10+10      3.5669      5.08  |   Q      |  V     |         |         |
10+15      3.6021      5.10  |   Q      |  V     |         |         |
10+20      3.6374      5.12  |   Q      |  V     |         |         |
10+25      3.6728      5.15  |   Q      |  V     |         |         |
10+30      3.7084      5.17  |   Q      |  V     |         |         |
10+35      3.7441      5.19  |   Q      |  V     |         |         |
```

```
10+40       3.7800      5.21  |   Q     |   V     |         |         |
10+45       3.8161      5.23  |   Q     |   V     |         |         |
10+50       3.8523      5.26  |   Q     |   V     |         |         |
10+55       3.8886      5.28  |   Q     |   V     |         |         |
11+ 0       3.9252      5.31  |   Q     |   V     |         |         |
11+ 5       3.9619      5.33  |   Q     |   V     |         |         |
11+10       3.9988      5.36  |   Q     |   V     |         |         |
11+15       4.0358      5.38  |   Q     |   V     |         |         |
11+20       4.0731      5.41  |   Q     |    V    |         |         |
11+25       4.1105      5.44  |   Q     |    V    |         |         |
11+30       4.1481      5.46  |   Q     |    V    |         |         |
11+35       4.1859      5.49  |   Q     |    V    |         |         |
11+40       4.2240      5.52  |   Q     |    V    |         |         |
11+45       4.2622      5.55  |   Q     |    V    |         |         |
11+50       4.3006      5.58  |   Q     |    V    |         |         |
11+55       4.3392      5.61  |   Q     |     V   |         |         |
12+ 0       4.3781      5.64  |   Q     |     V   |         |         |
12+ 5       4.4169      5.64  |   Q     |     V   |         |         |
12+10       4.4547      5.48  |   Q     |     V   |         |         |
12+15       4.4907      5.24  |   Q     |     V   |         |         |
12+20       4.5263      5.17  |   Q     |     V   |         |         |
12+25       4.5618      5.15  |   Q     |     V   |         |         |
12+30       4.5973      5.15  |   Q     |      V  |         |         |
12+35       4.6329      5.17  |   Q     |      V  |         |         |
12+40       4.6688      5.21  |   Q     |      V  |         |         |
12+45       4.7049      5.25  |   Q     |      V  |         |         |
12+50       4.7414      5.29  |   Q     |      V  |         |         |
12+55       4.7782      5.34  |   Q     |      V  |         |         |
13+ 0       4.8153      5.39  |   Q     |      V  |         |         |
13+ 5       4.8528      5.44  |   Q     |      V  |         |         |
13+10       4.8906      5.50  |   Q     |       V |         |         |
13+15       4.9289      5.56  |   Q     |       V |         |         |
13+20       4.9676      5.62  |   Q     |       V |         |         |
13+25       5.0067      5.68  |   Q     |       V |         |         |
13+30       5.0463      5.75  |   Q     |       V |         |         |
13+35       5.0863      5.82  |   Q     |       V |         |         |
13+40       5.1269      5.89  |   Q     |        V|         |         |
13+45       5.1679      5.96  |   Q     |        V|         |         |
13+50       5.2095      6.04  |   Q     |        V|         |         |
13+55       5.2517      6.12  |   Q     |        V|         |         |
14+ 0       5.2944      6.21  |   Q     |        V|         |         |
14+ 5       5.3378      6.30  |    Q    |        V|         |         |
14+10       5.3818      6.39  |    Q    |        V|         |         |
14+15       5.4266      6.50  |    Q    |         V         |         |
14+20       5.4721      6.60  |    Q    |         V         |         |
14+25       5.5184      6.72  |    Q    |         V         |         |
14+30       5.5655      6.84  |    Q    |         V         |         |
14+35       5.6135      6.97  |    Q    |         V         |         |
14+40       5.6624      7.11  |    Q    |         V         |         |
14+45       5.7124      7.26  |    Q    |         |V        |         |
14+50       5.7635      7.42  |    Q    |         |V        |         |
14+55       5.8159      7.60  |     Q   |         |V        |         |
15+ 0       5.8695      7.78  |     Q   |         |V        |         |
15+ 5       5.9246      8.00  |     Q   |         |V        |         |
15+10       5.9812      8.23  |     Q   |         | V       |         |
15+15       6.0397      8.49  |     Q   |         | V       |         |
15+20       6.1001      8.77  |      Q  |         | V       |         |
15+25       6.1612      8.87  |      Q  |         | V       |         |
15+30       6.2160      7.97  |     Q   |         |  V      |         |
15+35       6.2610      6.53  |    Q    |         |  V      |         |
15+40       6.3046      6.34  |    Q    |         |  V      |         |
15+45       6.3501      6.60  |    Q    |         |  V      |         |
15+50       6.3998      7.22  |    Q    |         |  V      |         |
15+55       6.4577      8.41  |     Q   |         |  V      |         |
16+ 0       6.5315     10.71  |       Q |         |   V     |         |
16+ 5       6.6570     18.23  |         |   Q     |   V     |         |
16+10       6.9085     36.52  |         |         |    V   Q|         |
16+15       7.2158     44.62  |         |         |     V   |    Q    |
16+20       7.3728     22.79  |         |       Q |      V  |         |
16+25       7.4817     15.82  |         | Q       |      V  |         |
16+30       7.5709     12.95  |         Q         |       V |         |
```

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16+35      7.6528    11.89  |        Q|         |       V |         |
16+40      7.7239    10.33  |       Q |         |       V |         |
16+45      7.7864     9.08  |      Q  |         |       V |         |
16+50      7.8452     8.54  |     Q   |         |        V|         |
16+55      7.9010     8.11  |     Q   |         |        V|         |
17+ 0      7.9545     7.76  |     Q   |         |        V|         |
17+ 5      8.0049     7.33  |    Q    |         |        V|         |
17+10      8.0522     6.86  |    Q    |         |        V|         |
17+15      8.0978     6.62  |    Q    |         |         V         |
17+20      8.1420     6.42  |    Q    |         |         V         |
17+25      8.1849     6.23  |   Q     |         |         V         |
17+30      8.2266     6.06  |   Q     |         |         V         |
17+35      8.2673     5.90  |   Q     |         |         V         |
17+40      8.3069     5.76  |   Q     |         |         V         |
17+45      8.3457     5.63  |   Q     |         |         V         |
17+50      8.3836     5.51  |   Q     |         |         |V        |
17+55      8.4208     5.40  |   Q     |         |         |V        |
18+ 0      8.4572     5.29  |   Q     |         |         |V        |
18+ 5      8.4932     5.23  |   Q     |         |         |V        |
18+10      8.5300     5.33  |   Q     |         |         |V        |
18+15      8.5681     5.53  |   Q     |         |         |V        |
18+20      8.6064     5.56  |   Q     |         |         |V        |
18+25      8.6446     5.56  |   Q     |         |         | V       |
18+30      8.6827     5.53  |   Q     |         |         | V       |
18+35      8.7205     5.49  |   Q     |         |         | V       |
18+40      8.7581     5.45  |   Q     |         |         | V       |
18+45      8.7952     5.40  |   Q     |         |         | V       |
18+50      8.8321     5.35  |   Q     |         |         | V       |
18+55      8.8686     5.30  |   Q     |         |         | V       |
19+ 0      8.9048     5.26  |   Q     |         |         |  V      |
19+ 5      8.9407     5.21  |   Q     |         |         |  V      |
19+10      8.9763     5.17  |   Q     |         |         |  V      |
19+15      9.0116     5.12  |   Q     |         |         |  V      |
19+20      9.0466     5.08  |   Q     |         |         |  V      |
19+25      9.0813     5.04  |   Q     |         |         |  V      |
19+30      9.1158     5.00  |   Q     |         |         |  V      |
19+35      9.1500     4.97  |  Q      |         |         |  V      |
19+40      9.1839     4.93  |  Q      |         |         |   V     |
19+45      9.2176     4.90  |  Q      |         |         |   V     |
19+50      9.2511     4.86  |  Q      |         |         |   V     |
19+55      9.2844     4.83  |  Q      |         |         |   V     |
20+ 0      9.3174     4.80  |  Q      |         |         |   V     |
20+ 5      9.3502     4.77  |  Q      |         |         |   V     |
20+10      9.3829     4.74  |  Q      |         |         |   V     |
20+15      9.4153     4.71  |  Q      |         |         |   V     |
20+20      9.4475     4.68  |  Q      |         |         |    V    |
20+25      9.4795     4.65  |  Q      |         |         |    V    |
20+30      9.5113     4.62  |  Q      |         |         |    V    |
20+35      9.5430     4.60  |  Q      |         |         |    V    |
20+40      9.5745     4.57  |  Q      |         |         |    V    |
20+45      9.6058     4.55  |  Q      |         |         |    V    |
20+50      9.6369     4.52  |  Q      |         |         |    V    |
20+55      9.6679     4.50  |  Q      |         |         |    V    |
21+ 0      9.6987     4.47  |  Q      |         |         |    V    |
21+ 5      9.7294     4.45  |  Q      |         |         |     V   |
21+10      9.7599     4.43  |  Q      |         |         |     V   |
21+15      9.7902     4.41  |  Q      |         |         |     V   |
21+20      9.8204     4.39  |  Q      |         |         |     V   |
21+25      9.8505     4.36  |  Q      |         |         |     V   |
21+30      9.8804     4.34  |  Q      |         |         |     V   |
21+35      9.9102     4.32  |  Q      |         |         |     V   |
21+40      9.9398     4.30  |  Q      |         |         |     V   |
21+45      9.9693     4.29  |  Q      |         |         |     V   |
21+50      9.9987     4.27  |  Q      |         |         |      V  |
21+55     10.0280     4.25  |  Q      |         |         |      V  |
22+ 0     10.0571     4.23  |  Q      |         |         |      V  |
22+ 5     10.0861     4.21  |  Q      |         |         |      V  |
22+10     10.1150     4.19  |  Q      |         |         |      V  |
22+15     10.1438     4.18  |  Q      |         |         |      V  |
22+20     10.1724     4.16  |  Q      |         |         |      V  |
22+25     10.2009     4.14  |  Q      |         |         |      V  |
```

```
   22+30      10.2294      4.13  |  Q      |         |         |      V  |
   22+35      10.2577      4.11  |  Q      |         |         |       V |
   22+40      10.2859      4.10  |  Q      |         |         |       V |
   22+45      10.3140      4.08  |  Q      |         |         |       V |
   22+50      10.3420      4.06  |  Q      |         |         |       V |
   22+55      10.3699      4.05  |  Q      |         |         |       V |
   23+ 0      10.3977      4.03  |  Q      |         |         |       V |
   23+ 5      10.4253      4.02  |  Q      |         |         |       V |
   23+10      10.4529      4.01  |  Q      |         |         |       V |
   23+15      10.4804      3.99  |  Q      |         |         |       V |
   23+20      10.5078      3.98  |  Q      |         |         |       V |
   23+25      10.5351      3.96  |  Q      |         |         |        V|
   23+30      10.5623      3.95  |  Q      |         |         |        V|
   23+35      10.5895      3.94  |  Q      |         |         |        V|
   23+40      10.6165      3.92  |  Q      |         |         |        V|
   23+45      10.6434      3.91  |  Q      |         |         |        V|
   23+50      10.6703      3.90  |  Q      |         |         |        V|
   23+55      10.6970      3.89  |  Q      |         |         |        V|
   24+ 0      10.7237      3.87  |  Q      |         |         |        V|
   24+ 5      10.7491      3.68  | Q       |         |         |        V|
   24+10      10.7678      2.72  | Q       |         |         |        V|
   24+15      10.7767      1.29  |Q        |         |         |        V|
   24+20      10.7820      0.77  Q         |         |         |        V|
   24+25      10.7852      0.46  Q         |         |         |        V|
   24+30      10.7870      0.27  Q         |         |         |        V|
   24+35      10.7880      0.15  Q         |         |         |        V|
   24+40      10.7886      0.08  Q         |         |         |        V|
   24+45      10.7890      0.06  Q         |         |         |        V|
   24+50      10.7892      0.04  Q         |         |         |        V|
   24+55      10.7894      0.02  Q         |         |         |        V|
   25+ 0      10.7894      0.01  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'C' – 2 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

       Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

              Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
              Manual date - August 1986


Program License Serial Number 6407

------------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
2 YEAR 24 HOUR STORM
DECEMBER 4, 2024
------------------------------------------------------------------------

       Storm Event Year = 2

       Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
       Sub-Area        Duration        Isohyetal
       (Ac.)            (hours)         (In)
Rainfall data for year 10
            6.54           1           1.00
------------------------------------------------------------------
Rainfall data for year 2
            6.54           6           2.00
------------------------------------------------------------------
Rainfall data for year 2
            6.54          24           4.00
------------------------------------------------------------------
Rainfall data for year 100
            6.54           1           1.50
------------------------------------------------------------------
Rainfall data for year 100
            6.54           6           4.50
------------------------------------------------------------------
Rainfall data for year 100
            6.54          24          12.00
------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 32.0      16.6          6.54      1.000     1.000    0.600    0.600

Area-averaged adjusted loss rate Fm (In/Hr) =  0.600

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
3.92	0.600	32.0	16.6	20.00	0.000
2.62	0.400	98.0	98.0	0.20	0.941

Area-averaged catchment yield fraction, Y = 0.377
Area-averaged low loss fraction, Yb = 0.623
User entry of time of concentration = 0.152 (hours)
++
Watershed area = 6.54(Ac.)
Catchment Lag time = 0.121 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 68.6210
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.600(In/Hr)
Average low loss rate fraction (Yb) = 0.623 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.309(In)
Computed peak 30-minute rainfall = 0.528(In)
Specified peak 1-hour rainfall = 0.651(In)
Computed peak 3-hour rainfall = 1.295(In)
Specified peak 6-hour rainfall = 2.000(In)
Specified peak 24-hour rainfall = 4.000(In)

Rainfall depth area reduction factors:
Using a total area of 6.54(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.309(In)
30-minute factor = 1.000 Adjusted rainfall = 0.528(In)
1-hour factor = 1.000 Adjusted rainfall = 0.650(In)
3-hour factor = 1.000 Adjusted rainfall = 1.295(In)
6-hour factor = 1.000 Adjusted rainfall = 2.000(In)
24-hour factor = 1.000 Adjusted rainfall = 4.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 79.09 (CFS))	
1	6.926	5.478
2	46.826	31.558
3	76.548	23.508
4	87.652	8.782
5	93.849	4.901
6	97.160	2.619
7	98.439	1.012
8	99.077	0.504
9	99.557	0.380
10	99.888	0.262
11	100.000	0.088

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3086	0.3086
2	0.3799	0.0713
3	0.4290	0.0491
4	0.4677	0.0387
5	0.5001	0.0324
6	0.5282	0.0281
7	0.5532	0.0250
8	0.5758	0.0226
9	0.5965	0.0207
10	0.6157	0.0192
11	0.6336	0.0179
12	0.6503	0.0168
13	0.6838	0.0335
14	0.7163	0.0325

15	0.7480	0.0317
16	0.7789	0.0309
17	0.8091	0.0302
18	0.8386	0.0295
19	0.8675	0.0289
20	0.8959	0.0284
21	0.9237	0.0278
22	0.9510	0.0273
23	0.9779	0.0269
24	1.0044	0.0265
25	1.0304	0.0260
26	1.0561	0.0257
27	1.0814	0.0253
28	1.1063	0.0249
29	1.1309	0.0246
30	1.1552	0.0243
31	1.1792	0.0240
32	1.2029	0.0237
33	1.2264	0.0234
34	1.2495	0.0232
35	1.2725	0.0229
36	1.2951	0.0227
37	1.3176	0.0224
38	1.3398	0.0222
39	1.3618	0.0220
40	1.3836	0.0218
41	1.4052	0.0216
42	1.4265	0.0214
43	1.4477	0.0212
44	1.4688	0.0210
45	1.4896	0.0208
46	1.5103	0.0207
47	1.5308	0.0205
48	1.5511	0.0203
49	1.5713	0.0202
50	1.5913	0.0200
51	1.6112	0.0199
52	1.6309	0.0197
53	1.6505	0.0196
54	1.6699	0.0195
55	1.6893	0.0193
56	1.7085	0.0192
57	1.7275	0.0191
58	1.7464	0.0189
59	1.7653	0.0188
60	1.7840	0.0187
61	1.8025	0.0186
62	1.8210	0.0185
63	1.8394	0.0184
64	1.8576	0.0182
65	1.8758	0.0181
66	1.8938	0.0180
67	1.9117	0.0179
68	1.9296	0.0178
69	1.9473	0.0177
70	1.9650	0.0176
71	1.9825	0.0175
72	2.0000	0.0175
73	2.0138	0.0138
74	2.0275	0.0137
75	2.0412	0.0137
76	2.0548	0.0136
77	2.0682	0.0135
78	2.0816	0.0134
79	2.0949	0.0133
80	2.1081	0.0132
81	2.1213	0.0131
82	2.1343	0.0131
83	2.1473	0.0130
84	2.1602	0.0129
85	2.1730	0.0128

86	2.1858	0.0127
87	2.1984	0.0127
88	2.2110	0.0126
89	2.2236	0.0125
90	2.2360	0.0125
91	2.2484	0.0124
92	2.2607	0.0123
93	2.2730	0.0123
94	2.2852	0.0122
95	2.2973	0.0121
96	2.3094	0.0121
97	2.3214	0.0120
98	2.3333	0.0119
99	2.3452	0.0119
100	2.3570	0.0118
101	2.3687	0.0118
102	2.3804	0.0117
103	2.3921	0.0116
104	2.4037	0.0116
105	2.4152	0.0115
106	2.4267	0.0115
107	2.4381	0.0114
108	2.4494	0.0114
109	2.4608	0.0113
110	2.4720	0.0113
111	2.4832	0.0112
112	2.4944	0.0112
113	2.5055	0.0111
114	2.5166	0.0111
115	2.5276	0.0110
116	2.5385	0.0110
117	2.5495	0.0109
118	2.5603	0.0109
119	2.5712	0.0108
120	2.5819	0.0108
121	2.5927	0.0107
122	2.6034	0.0107
123	2.6140	0.0106
124	2.6246	0.0106
125	2.6352	0.0106
126	2.6457	0.0105
127	2.6562	0.0105
128	2.6666	0.0104
129	2.6770	0.0104
130	2.6874	0.0104
131	2.6977	0.0103
132	2.7080	0.0103
133	2.7182	0.0102
134	2.7284	0.0102
135	2.7386	0.0102
136	2.7487	0.0101
137	2.7588	0.0101
138	2.7688	0.0101
139	2.7788	0.0100
140	2.7888	0.0100
141	2.7988	0.0099
142	2.8087	0.0099
143	2.8185	0.0099
144	2.8284	0.0098
145	2.8382	0.0098
146	2.8480	0.0098
147	2.8577	0.0097
148	2.8674	0.0097
149	2.8771	0.0097
150	2.8867	0.0096
151	2.8963	0.0096
152	2.9059	0.0096
153	2.9154	0.0095
154	2.9249	0.0095
155	2.9344	0.0095
156	2.9439	0.0095

157	2.9533	0.0094
158	2.9627	0.0094
159	2.9721	0.0094
160	2.9814	0.0093
161	2.9907	0.0093
162	3.0000	0.0093
163	3.0092	0.0092
164	3.0184	0.0092
165	3.0276	0.0092
166	3.0368	0.0092
167	3.0459	0.0091
168	3.0550	0.0091
169	3.0641	0.0091
170	3.0731	0.0091
171	3.0822	0.0090
172	3.0912	0.0090
173	3.1001	0.0090
174	3.1091	0.0089
175	3.1180	0.0089
176	3.1269	0.0089
177	3.1358	0.0089
178	3.1446	0.0088
179	3.1534	0.0088
180	3.1622	0.0088
181	3.1710	0.0088
182	3.1798	0.0087
183	3.1885	0.0087
184	3.1972	0.0087
185	3.2059	0.0087
186	3.2145	0.0087
187	3.2231	0.0086
188	3.2317	0.0086
189	3.2403	0.0086
190	3.2489	0.0086
191	3.2574	0.0085
192	3.2659	0.0085
193	3.2744	0.0085
194	3.2829	0.0085
195	3.2914	0.0085
196	3.2998	0.0084
197	3.3082	0.0084
198	3.3166	0.0084
199	3.3250	0.0084
200	3.3333	0.0083
201	3.3416	0.0083
202	3.3499	0.0083
203	3.3582	0.0083
204	3.3665	0.0083
205	3.3747	0.0082
206	3.3829	0.0082
207	3.3911	0.0082
208	3.3993	0.0082
209	3.4075	0.0082
210	3.4156	0.0081
211	3.4237	0.0081
212	3.4318	0.0081
213	3.4399	0.0081
214	3.4480	0.0081
215	3.4560	0.0080
216	3.4641	0.0080
217	3.4721	0.0080
218	3.4801	0.0080
219	3.4880	0.0080
220	3.4960	0.0080
221	3.5039	0.0079
222	3.5118	0.0079
223	3.5197	0.0079
224	3.5276	0.0079
225	3.5355	0.0079
226	3.5433	0.0078
227	3.5512	0.0078

228	3.5590	0.0078
229	3.5668	0.0078
230	3.5746	0.0078
231	3.5823	0.0078
232	3.5901	0.0077
233	3.5978	0.0077
234	3.6055	0.0077
235	3.6132	0.0077
236	3.6209	0.0077
237	3.6286	0.0077
238	3.6362	0.0076
239	3.6438	0.0076
240	3.6514	0.0076
241	3.6590	0.0076
242	3.6666	0.0076
243	3.6742	0.0076
244	3.6818	0.0076
245	3.6893	0.0075
246	3.6968	0.0075
247	3.7043	0.0075
248	3.7118	0.0075
249	3.7193	0.0075
250	3.7267	0.0075
251	3.7342	0.0074
252	3.7416	0.0074
253	3.7490	0.0074
254	3.7564	0.0074
255	3.7638	0.0074
256	3.7712	0.0074
257	3.7786	0.0074
258	3.7859	0.0073
259	3.7932	0.0073
260	3.8006	0.0073
261	3.8079	0.0073
262	3.8151	0.0073
263	3.8224	0.0073
264	3.8297	0.0073
265	3.8369	0.0072
266	3.8442	0.0072
267	3.8514	0.0072
268	3.8586	0.0072
269	3.8658	0.0072
270	3.8729	0.0072
271	3.8801	0.0072
272	3.8873	0.0072
273	3.8944	0.0071
274	3.9015	0.0071
275	3.9086	0.0071
276	3.9157	0.0071
277	3.9228	0.0071
278	3.9299	0.0071
279	3.9370	0.0071
280	3.9440	0.0070
281	3.9511	0.0070
282	3.9581	0.0070
283	3.9651	0.0070
284	3.9721	0.0070
285	3.9791	0.0070
286	3.9861	0.0070
287	3.9930	0.0070
288	4.0000	0.0070

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0070	0.0043	0.0026
2	0.0070	0.0043	0.0026
3	0.0070	0.0044	0.0026
4	0.0070	0.0044	0.0026
5	0.0070	0.0044	0.0026

6	0.0070	0.0044	0.0026
7	0.0071	0.0044	0.0027
8	0.0071	0.0044	0.0027
9	0.0071	0.0044	0.0027
10	0.0071	0.0044	0.0027
11	0.0071	0.0045	0.0027
12	0.0072	0.0045	0.0027
13	0.0072	0.0045	0.0027
14	0.0072	0.0045	0.0027
15	0.0072	0.0045	0.0027
16	0.0072	0.0045	0.0027
17	0.0073	0.0045	0.0027
18	0.0073	0.0045	0.0027
19	0.0073	0.0046	0.0027
20	0.0073	0.0046	0.0028
21	0.0073	0.0046	0.0028
22	0.0074	0.0046	0.0028
23	0.0074	0.0046	0.0028
24	0.0074	0.0046	0.0028
25	0.0074	0.0046	0.0028
26	0.0074	0.0046	0.0028
27	0.0075	0.0047	0.0028
28	0.0075	0.0047	0.0028
29	0.0075	0.0047	0.0028
30	0.0075	0.0047	0.0028
31	0.0076	0.0047	0.0028
32	0.0076	0.0047	0.0029
33	0.0076	0.0047	0.0029
34	0.0076	0.0048	0.0029
35	0.0077	0.0048	0.0029
36	0.0077	0.0048	0.0029
37	0.0077	0.0048	0.0029
38	0.0077	0.0048	0.0029
39	0.0078	0.0048	0.0029
40	0.0078	0.0049	0.0029
41	0.0078	0.0049	0.0029
42	0.0078	0.0049	0.0029
43	0.0079	0.0049	0.0030
44	0.0079	0.0049	0.0030
45	0.0079	0.0049	0.0030
46	0.0079	0.0049	0.0030
47	0.0080	0.0050	0.0030
48	0.0080	0.0050	0.0030
49	0.0080	0.0050	0.0030
50	0.0080	0.0050	0.0030
51	0.0081	0.0050	0.0030
52	0.0081	0.0051	0.0031
53	0.0081	0.0051	0.0031
54	0.0082	0.0051	0.0031
55	0.0082	0.0051	0.0031
56	0.0082	0.0051	0.0031
57	0.0083	0.0052	0.0031
58	0.0083	0.0052	0.0031
59	0.0083	0.0052	0.0031
60	0.0083	0.0052	0.0031
61	0.0084	0.0052	0.0032
62	0.0084	0.0052	0.0032
63	0.0085	0.0053	0.0032
64	0.0085	0.0053	0.0032
65	0.0085	0.0053	0.0032
66	0.0085	0.0053	0.0032
67	0.0086	0.0054	0.0032
68	0.0086	0.0054	0.0032
69	0.0087	0.0054	0.0033
70	0.0087	0.0054	0.0033
71	0.0087	0.0054	0.0033
72	0.0087	0.0055	0.0033
73	0.0088	0.0055	0.0033
74	0.0088	0.0055	0.0033
75	0.0089	0.0055	0.0033
76	0.0089	0.0055	0.0033

77	0.0089	0.0056	0.0034
78	0.0090	0.0056	0.0034
79	0.0090	0.0056	0.0034
80	0.0091	0.0056	0.0034
81	0.0091	0.0057	0.0034
82	0.0091	0.0057	0.0034
83	0.0092	0.0057	0.0035
84	0.0092	0.0057	0.0035
85	0.0093	0.0058	0.0035
86	0.0093	0.0058	0.0035
87	0.0094	0.0058	0.0035
88	0.0094	0.0059	0.0035
89	0.0095	0.0059	0.0036
90	0.0095	0.0059	0.0036
91	0.0095	0.0060	0.0036
92	0.0096	0.0060	0.0036
93	0.0096	0.0060	0.0036
94	0.0097	0.0060	0.0036
95	0.0097	0.0061	0.0037
96	0.0098	0.0061	0.0037
97	0.0098	0.0061	0.0037
98	0.0099	0.0062	0.0037
99	0.0099	0.0062	0.0037
100	0.0100	0.0062	0.0038
101	0.0101	0.0063	0.0038
102	0.0101	0.0063	0.0038
103	0.0102	0.0063	0.0038
104	0.0102	0.0064	0.0038
105	0.0103	0.0064	0.0039
106	0.0103	0.0064	0.0039
107	0.0104	0.0065	0.0039
108	0.0104	0.0065	0.0039
109	0.0105	0.0066	0.0040
110	0.0106	0.0066	0.0040
111	0.0106	0.0066	0.0040
112	0.0107	0.0067	0.0040
113	0.0108	0.0067	0.0041
114	0.0108	0.0068	0.0041
115	0.0109	0.0068	0.0041
116	0.0110	0.0068	0.0041
117	0.0111	0.0069	0.0042
118	0.0111	0.0069	0.0042
119	0.0112	0.0070	0.0042
120	0.0113	0.0070	0.0042
121	0.0114	0.0071	0.0043
122	0.0114	0.0071	0.0043
123	0.0115	0.0072	0.0043
124	0.0116	0.0072	0.0044
125	0.0117	0.0073	0.0044
126	0.0118	0.0073	0.0044
127	0.0119	0.0074	0.0045
128	0.0119	0.0074	0.0045
129	0.0121	0.0075	0.0045
130	0.0121	0.0076	0.0046
131	0.0123	0.0076	0.0046
132	0.0123	0.0077	0.0046
133	0.0125	0.0078	0.0047
134	0.0125	0.0078	0.0047
135	0.0127	0.0079	0.0048
136	0.0127	0.0079	0.0048
137	0.0129	0.0080	0.0049
138	0.0130	0.0081	0.0049
139	0.0131	0.0082	0.0049
140	0.0132	0.0082	0.0050
141	0.0134	0.0083	0.0050
142	0.0135	0.0084	0.0051
143	0.0137	0.0085	0.0051
144	0.0137	0.0086	0.0052
145	0.0175	0.0109	0.0066
146	0.0175	0.0109	0.0066
147	0.0177	0.0111	0.0067

148	0.0178	0.0111	0.0067
149	0.0180	0.0112	0.0068
150	0.0181	0.0113	0.0068
151	0.0184	0.0114	0.0069
152	0.0185	0.0115	0.0070
153	0.0187	0.0117	0.0070
154	0.0188	0.0117	0.0071
155	0.0191	0.0119	0.0072
156	0.0192	0.0120	0.0072
157	0.0195	0.0121	0.0073
158	0.0196	0.0122	0.0074
159	0.0199	0.0124	0.0075
160	0.0200	0.0125	0.0075
161	0.0203	0.0127	0.0077
162	0.0205	0.0128	0.0077
163	0.0208	0.0130	0.0078
164	0.0210	0.0131	0.0079
165	0.0214	0.0133	0.0081
166	0.0216	0.0135	0.0081
167	0.0220	0.0137	0.0083
168	0.0222	0.0138	0.0084
169	0.0227	0.0141	0.0085
170	0.0229	0.0143	0.0086
171	0.0234	0.0146	0.0088
172	0.0237	0.0148	0.0089
173	0.0243	0.0152	0.0091
174	0.0246	0.0153	0.0093
175	0.0253	0.0158	0.0095
176	0.0257	0.0160	0.0097
177	0.0265	0.0165	0.0100
178	0.0269	0.0168	0.0101
179	0.0278	0.0174	0.0105
180	0.0284	0.0177	0.0107
181	0.0295	0.0184	0.0111
182	0.0302	0.0188	0.0114
183	0.0317	0.0197	0.0119
184	0.0325	0.0203	0.0122
185	0.0168	0.0104	0.0063
186	0.0179	0.0111	0.0067
187	0.0207	0.0129	0.0078
188	0.0226	0.0141	0.0085
189	0.0281	0.0175	0.0106
190	0.0324	0.0202	0.0122
191	0.0491	0.0306	0.0185
192	0.0713	0.0445	0.0269
193	0.3086	0.0500	0.2586
194	0.0387	0.0241	0.0146
195	0.0250	0.0156	0.0094
196	0.0192	0.0119	0.0072
197	0.0335	0.0209	0.0126
198	0.0309	0.0193	0.0116
199	0.0289	0.0180	0.0109
200	0.0273	0.0170	0.0103
201	0.0260	0.0162	0.0098
202	0.0249	0.0156	0.0094
203	0.0240	0.0150	0.0090
204	0.0232	0.0144	0.0087
205	0.0224	0.0140	0.0084
206	0.0218	0.0136	0.0082
207	0.0212	0.0132	0.0080
208	0.0207	0.0129	0.0078
209	0.0202	0.0126	0.0076
210	0.0197	0.0123	0.0074
211	0.0193	0.0120	0.0073
212	0.0189	0.0118	0.0071
213	0.0186	0.0116	0.0070
214	0.0182	0.0114	0.0069
215	0.0179	0.0112	0.0068
216	0.0176	0.0110	0.0066
217	0.0138	0.0086	0.0052
218	0.0136	0.0085	0.0051

219	0.0133	0.0083	0.0050
220	0.0131	0.0081	0.0049
221	0.0128	0.0080	0.0048
222	0.0126	0.0079	0.0047
223	0.0124	0.0077	0.0047
224	0.0122	0.0076	0.0046
225	0.0120	0.0075	0.0045
226	0.0118	0.0074	0.0044
227	0.0116	0.0073	0.0044
228	0.0115	0.0072	0.0043
229	0.0113	0.0071	0.0043
230	0.0112	0.0070	0.0042
231	0.0110	0.0069	0.0041
232	0.0109	0.0068	0.0041
233	0.0107	0.0067	0.0040
234	0.0106	0.0066	0.0040
235	0.0105	0.0065	0.0039
236	0.0104	0.0065	0.0039
237	0.0102	0.0064	0.0039
238	0.0101	0.0063	0.0038
239	0.0100	0.0062	0.0038
240	0.0099	0.0062	0.0037
241	0.0098	0.0061	0.0037
242	0.0097	0.0061	0.0037
243	0.0096	0.0060	0.0036
244	0.0095	0.0059	0.0036
245	0.0094	0.0059	0.0035
246	0.0093	0.0058	0.0035
247	0.0092	0.0058	0.0035
248	0.0092	0.0057	0.0034
249	0.0091	0.0057	0.0034
250	0.0090	0.0056	0.0034
251	0.0089	0.0056	0.0034
252	0.0088	0.0055	0.0033
253	0.0088	0.0055	0.0033
254	0.0087	0.0054	0.0033
255	0.0086	0.0054	0.0032
256	0.0086	0.0053	0.0032
257	0.0085	0.0053	0.0032
258	0.0084	0.0053	0.0032
259	0.0084	0.0052	0.0031
260	0.0083	0.0052	0.0031
261	0.0082	0.0051	0.0031
262	0.0082	0.0051	0.0031
263	0.0081	0.0051	0.0031
264	0.0081	0.0050	0.0030
265	0.0080	0.0050	0.0030
266	0.0080	0.0050	0.0030
267	0.0079	0.0049	0.0030
268	0.0078	0.0049	0.0030
269	0.0078	0.0049	0.0029
270	0.0077	0.0048	0.0029
271	0.0077	0.0048	0.0029
272	0.0076	0.0048	0.0029
273	0.0076	0.0047	0.0029
274	0.0076	0.0047	0.0028
275	0.0075	0.0047	0.0028
276	0.0075	0.0047	0.0028
277	0.0074	0.0046	0.0028
278	0.0074	0.0046	0.0028
279	0.0073	0.0046	0.0028
280	0.0073	0.0045	0.0027
281	0.0072	0.0045	0.0027
282	0.0072	0.0045	0.0027
283	0.0072	0.0045	0.0027
284	0.0071	0.0044	0.0027
285	0.0071	0.0044	0.0027
286	0.0070	0.0044	0.0027
287	0.0070	0.0044	0.0026
288	0.0070	0.0043	0.0026

```
      ----------------------------------------------------------------------
      Total soil rain loss =      2.35(In)
      Total effective rainfall =      1.65(In)
      Peak flow rate in flood hydrograph =      9.14(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0001      0.01  Q          |         |         |         |
  0+10       0.0008      0.10  Q          |         |         |         |
  0+15       0.0019      0.16  Q          |         |         |         |
  0+20       0.0031      0.18  Q          |         |         |         |
  0+25       0.0045      0.20  Q          |         |         |         |
  0+30       0.0059      0.20  Q          |         |         |         |
  0+35       0.0073      0.21  Q          |         |         |         |
  0+40       0.0087      0.21  Q          |         |         |         |
  0+45       0.0101      0.21  Q          |         |         |         |
  0+50       0.0116      0.21  Q          |         |         |         |
  0+55       0.0131      0.21  Q          |         |         |         |
  1+ 0       0.0145      0.21  Q          |         |         |         |
  1+ 5       0.0160      0.21  Q          |         |         |         |
  1+10       0.0174      0.21  Q          |         |         |         |
  1+15       0.0189      0.21  Q          |         |         |         |
  1+20       0.0204      0.21  Q          |         |         |         |
  1+25       0.0219      0.21  Q          |         |         |         |
  1+30       0.0234      0.22  QV         |         |         |         |
  1+35       0.0248      0.22  QV         |         |         |         |
  1+40       0.0263      0.22  QV         |         |         |         |
  1+45       0.0278      0.22  QV         |         |         |         |
  1+50       0.0293      0.22  QV         |         |         |         |
  1+55       0.0308      0.22  QV         |         |         |         |
  2+ 0       0.0324      0.22  QV         |         |         |         |
  2+ 5       0.0339      0.22  QV         |         |         |         |
  2+10       0.0354      0.22  QV         |         |         |         |
  2+15       0.0369      0.22  QV         |         |         |         |
  2+20       0.0384      0.22  QV         |         |         |         |
  2+25       0.0400      0.22  QV         |         |         |         |
  2+30       0.0415      0.22  QV         |         |         |         |
  2+35       0.0430      0.22  QV         |         |         |         |
  2+40       0.0446      0.22  QV         |         |         |         |
  2+45       0.0461      0.23  Q V        |         |         |         |
  2+50       0.0477      0.23  Q V        |         |         |         |
  2+55       0.0493      0.23  Q V        |         |         |         |
  3+ 0       0.0508      0.23  Q V        |         |         |         |
  3+ 5       0.0524      0.23  Q V        |         |         |         |
  3+10       0.0540      0.23  Q V        |         |         |         |
  3+15       0.0556      0.23  Q V        |         |         |         |
  3+20       0.0571      0.23  Q V        |         |         |         |
  3+25       0.0587      0.23  Q V        |         |         |         |
  3+30       0.0603      0.23  Q V        |         |         |         |
  3+35       0.0619      0.23  Q V        |         |         |         |
  3+40       0.0635      0.23  Q V        |         |         |         |
  3+45       0.0652      0.23  Q V        |         |         |         |
  3+50       0.0668      0.23  Q V        |         |         |         |
  3+55       0.0684      0.24  Q  V       |         |         |         |
  4+ 0       0.0700      0.24  Q  V       |         |         |         |
  4+ 5       0.0717      0.24  Q  V       |         |         |         |
  4+10       0.0733      0.24  Q  V       |         |         |         |
  4+15       0.0749      0.24  Q  V       |         |         |         |
  4+20       0.0766      0.24  Q  V       |         |         |         |
  4+25       0.0783      0.24  Q  V       |         |         |         |
  4+30       0.0799      0.24  Q  V       |         |         |         |
  4+35       0.0816      0.24  Q  V       |         |         |         |
  4+40       0.0833      0.24  Q  V       |         |         |         |
  4+45       0.0849      0.24  Q  V       |         |         |         |
```

```
 4+50      0.0866      0.25  Q  V      |          |          |          |
 4+55      0.0883      0.25  Q  V      |          |          |          |
 5+ 0      0.0900      0.25  Q   V     |          |          |          |
 5+ 5      0.0917      0.25  Q   V     |          |          |          |
 5+10      0.0934      0.25  Q   V     |          |          |          |
 5+15      0.0952      0.25  Q   V     |          |          |          |
 5+20      0.0969      0.25  |Q  V     |          |          |          |
 5+25      0.0986      0.25  |Q  V     |          |          |          |
 5+30      0.1004      0.25  |Q  V     |          |          |          |
 5+35      0.1021      0.25  |Q  V     |          |          |          |
 5+40      0.1039      0.25  |Q  V     |          |          |          |
 5+45      0.1056      0.26  |Q  V     |          |          |          |
 5+50      0.1074      0.26  |Q  V     |          |          |          |
 5+55      0.1092      0.26  |Q  V     |          |          |          |
 6+ 0      0.1109      0.26  |Q  V     |          |          |          |
 6+ 5      0.1127      0.26  |Q   V    |          |          |          |
 6+10      0.1145      0.26  |Q   V    |          |          |          |
 6+15      0.1163      0.26  |Q   V    |          |          |          |
 6+20      0.1181      0.26  |Q   V    |          |          |          |
 6+25      0.1200      0.26  |Q   V    |          |          |          |
 6+30      0.1218      0.27  |Q   V    |          |          |          |
 6+35      0.1236      0.27  |Q   V    |          |          |          |
 6+40      0.1255      0.27  |Q   V    |          |          |          |
 6+45      0.1273      0.27  |Q   V    |          |          |          |
 6+50      0.1292      0.27  |Q   V    |          |          |          |
 6+55      0.1310      0.27  |Q   V    |          |          |          |
 7+ 0      0.1329      0.27  |Q   V    |          |          |          |
 7+ 5      0.1348      0.27  |Q    V   |          |          |          |
 7+10      0.1367      0.27  |Q    V   |          |          |          |
 7+15      0.1386      0.28  |Q    V   |          |          |          |
 7+20      0.1405      0.28  |Q    V   |          |          |          |
 7+25      0.1424      0.28  |Q    V   |          |          |          |
 7+30      0.1444      0.28  |Q    V   |          |          |          |
 7+35      0.1463      0.28  |Q    V   |          |          |          |
 7+40      0.1482      0.28  |Q    V   |          |          |          |
 7+45      0.1502      0.28  |Q    V   |          |          |          |
 7+50      0.1522      0.29  |Q    V   |          |          |          |
 7+55      0.1541      0.29  |Q    V   |          |          |          |
 8+ 0      0.1561      0.29  |Q    V   |          |          |          |
 8+ 5      0.1581      0.29  |Q     V  |          |          |          |
 8+10      0.1601      0.29  |Q     V  |          |          |          |
 8+15      0.1621      0.29  |Q     V  |          |          |          |
 8+20      0.1642      0.29  |Q     V  |          |          |          |
 8+25      0.1662      0.30  |Q     V  |          |          |          |
 8+30      0.1683      0.30  |Q     V  |          |          |          |
 8+35      0.1703      0.30  |Q     V  |          |          |          |
 8+40      0.1724      0.30  |Q     V  |          |          |          |
 8+45      0.1745      0.30  |Q     V  |          |          |          |
 8+50      0.1766      0.30  |Q     V  |          |          |          |
 8+55      0.1787      0.31  |Q     V  |          |          |          |
 9+ 0      0.1808      0.31  |Q      V |          |          |          |
 9+ 5      0.1829      0.31  |Q      V |          |          |          |
 9+10      0.1851      0.31  |Q      V |          |          |          |
 9+15      0.1872      0.31  |Q      V |          |          |          |
 9+20      0.1894      0.32  |Q      V |          |          |          |
 9+25      0.1916      0.32  |Q      V |          |          |          |
 9+30      0.1938      0.32  |Q      V |          |          |          |
 9+35      0.1960      0.32  |Q      V |          |          |          |
 9+40      0.1982      0.32  |Q      V |          |          |          |
 9+45      0.2004      0.32  |Q      V |          |          |          |
 9+50      0.2027      0.33  |Q       V|          |          |          |
 9+55      0.2050      0.33  |Q       V|          |          |          |
10+ 0      0.2072      0.33  |Q       V|          |          |          |
10+ 5      0.2095      0.33  |Q       V|          |          |          |
10+10      0.2119      0.34  |Q       V|          |          |          |
10+15      0.2142      0.34  |Q       V|          |          |          |
10+20      0.2165      0.34  |Q       V|          |          |          |
10+25      0.2189      0.34  |Q       V|          |          |          |
10+30      0.2213      0.35  |Q       V|          |          |          |
10+35      0.2237      0.35  |Q       V|          |          |          |
10+40      0.2261      0.35  |Q        V          |          |          |
```

```
10+45       0.2285      0.35  |Q        V         |          |          |
10+50       0.2310      0.36  |Q        V         |          |          |
10+55       0.2334      0.36  |Q        V         |          |          |
11+ 0       0.2359      0.36  |Q        V         |          |          |
11+ 5       0.2384      0.36  |Q        V         |          |          |
11+10       0.2410      0.37  |Q        V         |          |          |
11+15       0.2435      0.37  |Q        V         |          |          |
11+20       0.2461      0.37  |Q        V         |          |          |
11+25       0.2487      0.38  |Q        |V        |          |          |
11+30       0.2513      0.38  |Q        |V        |          |          |
11+35       0.2540      0.38  |Q        |V        |          |          |
11+40       0.2566      0.39  |Q        |V        |          |          |
11+45       0.2593      0.39  |Q        |V        |          |          |
11+50       0.2620      0.39  |Q        |V        |          |          |
11+55       0.2648      0.40  |Q        |V        |          |          |
12+ 0       0.2676      0.40  |Q        |V        |          |          |
12+ 5       0.2704      0.41  |Q        | V       |          |          |
12+10       0.2736      0.46  |Q        | V       |          |          |
12+15       0.2770      0.49  |Q        | V       |          |          |
12+20       0.2805      0.51  | Q       | V       |          |          |
12+25       0.2841      0.52  | Q       | V       |          |          |
12+30       0.2877      0.53  | Q       | V       |          |          |
12+35       0.2914      0.54  | Q       | V       |          |          |
12+40       0.2951      0.54  | Q       |  V      |          |          |
12+45       0.2989      0.55  | Q       |  V      |          |          |
12+50       0.3027      0.55  | Q       |  V      |          |          |
12+55       0.3065      0.56  | Q       |  V      |          |          |
13+ 0       0.3104      0.56  | Q       |  V      |          |          |
13+ 5       0.3143      0.57  | Q       |   V     |          |          |
13+10       0.3182      0.57  | Q       |   V     |          |          |
13+15       0.3222      0.58  | Q       |   V     |          |          |
13+20       0.3263      0.59  | Q       |   V     |          |          |
13+25       0.3303      0.59  | Q       |   V     |          |          |
13+30       0.3345      0.60  | Q       |   V     |          |          |
13+35       0.3386      0.61  | Q       |    V    |          |          |
13+40       0.3428      0.61  | Q       |    V    |          |          |
13+45       0.3471      0.62  | Q       |    V    |          |          |
13+50       0.3514      0.63  | Q       |    V    |          |          |
13+55       0.3558      0.64  | Q       |    V    |          |          |
14+ 0       0.3603      0.65  | Q       |     V   |          |          |
14+ 5       0.3648      0.65  | Q       |     V   |          |          |
14+10       0.3693      0.66  | Q       |     V   |          |          |
14+15       0.3740      0.67  | Q       |     V   |          |          |
14+20       0.3787      0.69  | Q       |     V   |          |          |
14+25       0.3835      0.70  | Q       |      V  |          |          |
14+30       0.3884      0.71  | Q       |      V  |          |          |
14+35       0.3934      0.72  | Q       |      V  |          |          |
14+40       0.3985      0.74  | Q       |      V  |          |          |
14+45       0.4036      0.75  |  Q      |      V  |          |          |
14+50       0.4089      0.77  |  Q      |       V |          |          |
14+55       0.4144      0.79  |  Q      |       V |          |          |
15+ 0       0.4199      0.81  |  Q      |       V |          |          |
15+ 5       0.4256      0.83  |  Q      |       V |          |          |
15+10       0.4315      0.85  |  Q      |        V|          |          |
15+15       0.4376      0.88  |  Q      |        V|          |          |
15+20       0.4438      0.91  |  Q      |        V|          |          |
15+25       0.4501      0.91  |  Q      |         V          |          |
15+30       0.4551      0.74  | Q       |         V          |          |
15+35       0.4594      0.62  | Q       |         V          |          |
15+40       0.4637      0.62  | Q       |         V          |          |
15+45       0.4683      0.66  | Q       |         V          |          |
15+50       0.4734      0.75  | Q       |         |V         |          |
15+55       0.4795      0.89  |  Q      |         |V         |          |
16+ 0       0.4877      1.19  |   Q     |         |V         |          |
16+ 5       0.5077      2.90  |         |Q        | V        |          |
16+10       0.5706      9.14  |         |         |    V     |     Q    |
16+15       0.6186      6.97  |         |         |      Q   |          |
16+20       0.6403      3.15  |         | Q       |       V  |          |
16+25       0.6542      2.02  |       Q |         |        V|          |
16+30       0.6646      1.51  |     Q   |         |        V|          |
16+35       0.6725      1.16  |   Q     |         |        V|          |
```

```
16+40       0.6795      1.01  |   Q     |          |          V          |
16+45       0.6859      0.94  |  Q      |          |          V          |
16+50       0.6920      0.88  |  Q      |          |          V          |
16+55       0.6975      0.80  |  Q      |          |          |V         |
17+ 0       0.7026      0.74  | Q       |          |          |V         |
17+ 5       0.7075      0.72  | Q       |          |          |V         |
17+10       0.7123      0.69  | Q       |          |          |V         |
17+15       0.7169      0.67  | Q       |          |          |V         |
17+20       0.7214      0.65  | Q       |          |          | V        |
17+25       0.7257      0.63  | Q       |          |          | V        |
17+30       0.7300      0.62  | Q       |          |          | V        |
17+35       0.7341      0.60  | Q       |          |          | V        |
17+40       0.7382      0.59  | Q       |          |          | V        |
17+45       0.7421      0.58  | Q       |          |          |  V       |
17+50       0.7460      0.56  | Q       |          |          |  V       |
17+55       0.7498      0.55  | Q       |          |          |  V       |
18+ 0       0.7536      0.54  | Q       |          |          |  V       |
18+ 5       0.7572      0.53  | Q       |          |          |  V       |
18+10       0.7605      0.48  |Q        |          |          |  V       |
18+15       0.7635      0.44  |Q        |          |          |   V      |
18+20       0.7664      0.42  |Q        |          |          |   V      |
18+25       0.7691      0.40  |Q        |          |          |   V      |
18+30       0.7718      0.39  |Q        |          |          |   V      |
18+35       0.7745      0.38  |Q        |          |          |   V      |
18+40       0.7771      0.38  |Q        |          |          |   V      |
18+45       0.7796      0.37  |Q        |          |          |   V      |
18+50       0.7821      0.36  |Q        |          |          |   V      |
18+55       0.7846      0.36  |Q        |          |          |   V      |
19+ 0       0.7870      0.35  |Q        |          |          |    V     |
19+ 5       0.7894      0.35  |Q        |          |          |    V     |
19+10       0.7917      0.34  |Q        |          |          |    V     |
19+15       0.7941      0.34  |Q        |          |          |    V     |
19+20       0.7963      0.33  |Q        |          |          |    V     |
19+25       0.7986      0.33  |Q        |          |          |    V     |
19+30       0.8008      0.32  |Q        |          |          |    V     |
19+35       0.8030      0.32  |Q        |          |          |    V     |
19+40       0.8052      0.32  |Q        |          |          |    V     |
19+45       0.8074      0.31  |Q        |          |          |    V     |
19+50       0.8095      0.31  |Q        |          |          |     V    |
19+55       0.8116      0.30  |Q        |          |          |     V    |
20+ 0       0.8137      0.30  |Q        |          |          |     V    |
20+ 5       0.8157      0.30  |Q        |          |          |     V    |
20+10       0.8177      0.29  |Q        |          |          |     V    |
20+15       0.8197      0.29  |Q        |          |          |     V    |
20+20       0.8217      0.29  |Q        |          |          |     V    |
20+25       0.8237      0.29  |Q        |          |          |     V    |
20+30       0.8257      0.28  |Q        |          |          |     V    |
20+35       0.8276      0.28  |Q        |          |          |     V    |
20+40       0.8295      0.28  |Q        |          |          |     V    |
20+45       0.8314      0.28  |Q        |          |          |      V   |
20+50       0.8333      0.27  |Q        |          |          |      V   |
20+55       0.8351      0.27  |Q        |          |          |      V   |
21+ 0       0.8370      0.27  |Q        |          |          |      V   |
21+ 5       0.8388      0.27  |Q        |          |          |      V   |
21+10       0.8406      0.26  |Q        |          |          |      V   |
21+15       0.8424      0.26  |Q        |          |          |      V   |
21+20       0.8442      0.26  |Q        |          |          |      V   |
21+25       0.8460      0.26  |Q        |          |          |      V   |
21+30       0.8477      0.25  |Q        |          |          |      V   |
21+35       0.8495      0.25  |Q        |          |          |      V   |
21+40       0.8512      0.25  |Q        |          |          |      V   |
21+45       0.8529      0.25  Q         |          |          |      V   |
21+50       0.8546      0.25  Q         |          |          |       V  |
21+55       0.8563      0.25  Q         |          |          |       V  |
22+ 0       0.8580      0.24  Q         |          |          |       V  |
22+ 5       0.8597      0.24  Q         |          |          |       V  |
22+10       0.8613      0.24  Q         |          |          |       V  |
22+15       0.8629      0.24  Q         |          |          |       V  |
22+20       0.8646      0.24  Q         |          |          |       V  |
22+25       0.8662      0.24  Q         |          |          |       V  |
22+30       0.8678      0.23  Q         |          |          |       V  |
```

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  22+35       0.8694      0.23  Q         |          |          |       V |
  22+40       0.8710      0.23  Q         |          |          |       V |
  22+45       0.8726      0.23  Q         |          |          |       V |
  22+50       0.8741      0.23  Q         |          |          |       V |
  22+55       0.8757      0.23  Q         |          |          |        V|
  23+ 0       0.8772      0.22  Q         |          |          |        V|
  23+ 5       0.8788      0.22  Q         |          |          |        V|
  23+10       0.8803      0.22  Q         |          |          |        V|
  23+15       0.8818      0.22  Q         |          |          |        V|
  23+20       0.8833      0.22  Q         |          |          |        V|
  23+25       0.8849      0.22  Q         |          |          |        V|
  23+30       0.8863      0.22  Q         |          |          |        V|
  23+35       0.8878      0.22  Q         |          |          |        V|
  23+40       0.8893      0.21  Q         |          |          |        V|
  23+45       0.8908      0.21  Q         |          |          |        V|
  23+50       0.8922      0.21  Q         |          |          |        V|
  23+55       0.8937      0.21  Q         |          |          |        V|
  24+ 0       0.8951      0.21  Q         |          |          |        V|
  24+ 5       0.8965      0.19  Q         |          |          |        V|
  24+10       0.8972      0.11  Q         |          |          |        V|
  24+15       0.8976      0.05  Q         |          |          |        V|
  24+20       0.8978      0.03  Q         |          |          |        V|
  24+25       0.8978      0.01  Q         |          |          |        V|
  24+30       0.8979      0.01  Q         |          |          |        V|
  24+35       0.8979      0.00  Q         |          |          |        V|
  24+40       0.8979      0.00  Q         |          |          |        V|
  24+45       0.8979      0.00  Q         |          |          |        V|
  24+50       0.8979      0.00  Q         |          |          |        V|
-------------------------------------------------------------------------
```

Area 'C' – 5 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

       Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

              Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
              Manual date - August 1986


Program License Serial Number 6407

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TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
5 YEAR 24 HOUR STORM
DECEMBER 4, 2024
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       Storm Event Year = 5

       Antecedent Moisture Condition = 1

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
       Sub-Area        Duration        Isohyetal
       (Ac.)            (hours)         (In)
Rainfall data for year 10
            6.54           1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
            6.54           6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
            6.54          24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
            6.54           1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
            6.54           6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
            6.54          24          12.00
----------------------------------------------------------------------
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******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 1)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 32.0      16.6          6.54      1.000     1.000    0.600    0.600

Area-averaged adjusted loss rate Fm (In/Hr) =  0.600

********* Area-Averaged low loss rate fraction, Yb **********
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Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
3.92	0.600	32.0	16.6	29.37	0.000
2.62	0.400	98.0	98.0	0.20	0.959

Area-averaged catchment yield fraction, Y = 0.384
Area-averaged low loss fraction, Yb = 0.616
User entry of time of concentration = 0.152 (hours)
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Watershed area = 6.54(Ac.)
Catchment Lag time = 0.121 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 68.6210
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.600(In/Hr)
Average low loss rate fraction (Yb) = 0.616 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.403(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.849(In)
Computed peak 3-hour rainfall = 1.681(In)
Specified peak 6-hour rainfall = 2.586(In)
Specified peak 24-hour rainfall = 5.874(In)

Rainfall depth area reduction factors:
Using a total area of 6.54(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.403(In)
30-minute factor = 1.000 Adjusted rainfall = 0.690(In)
1-hour factor = 1.000 Adjusted rainfall = 0.849(In)
3-hour factor = 1.000 Adjusted rainfall = 1.681(In)
6-hour factor = 1.000 Adjusted rainfall = 2.586(In)
24-hour factor = 1.000 Adjusted rainfall = 5.874(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 79.09 (CFS))	
1	6.926	5.478
2	46.826	31.558
3	76.548	23.508
4	87.652	8.782
5	93.849	4.901
6	97.160	2.619
7	98.439	1.012
8	99.077	0.504
9	99.557	0.380
10	99.888	0.262
11	100.000	0.088

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4030	0.4030
2	0.4961	0.0931
3	0.5603	0.0642
4	0.6108	0.0505
5	0.6531	0.0423
6	0.6898	0.0367
7	0.7224	0.0326
8	0.7520	0.0295
9	0.7790	0.0270
10	0.8040	0.0250
11	0.8273	0.0233
12	0.8492	0.0219
13	0.8925	0.0433
14	0.9346	0.0421

15	0.9755	0.0409
16	1.0155	0.0399
17	1.0545	0.0390
18	1.0926	0.0381
19	1.1299	0.0373
20	1.1665	0.0366
21	1.2024	0.0359
22	1.2377	0.0353
23	1.2724	0.0347
24	1.3065	0.0341
25	1.3400	0.0336
26	1.3731	0.0331
27	1.4057	0.0326
28	1.4378	0.0321
29	1.4695	0.0317
30	1.5008	0.0313
31	1.5317	0.0309
32	1.5622	0.0305
33	1.5924	0.0302
34	1.6222	0.0298
35	1.6517	0.0295
36	1.6809	0.0292
37	1.7097	0.0289
38	1.7383	0.0286
39	1.7666	0.0283
40	1.7946	0.0280
41	1.8223	0.0277
42	1.8498	0.0275
43	1.8770	0.0272
44	1.9040	0.0270
45	1.9308	0.0268
46	1.9573	0.0265
47	1.9837	0.0263
48	2.0098	0.0261
49	2.0357	0.0259
50	2.0614	0.0257
51	2.0869	0.0255
52	2.1123	0.0253
53	2.1374	0.0251
54	2.1624	0.0250
55	2.1872	0.0248
56	2.2118	0.0246
57	2.2362	0.0245
58	2.2605	0.0243
59	2.2847	0.0241
60	2.3086	0.0240
61	2.3325	0.0238
62	2.3561	0.0237
63	2.3797	0.0235
64	2.4031	0.0234
65	2.4263	0.0233
66	2.4495	0.0231
67	2.4724	0.0230
68	2.4953	0.0229
69	2.5180	0.0227
70	2.5407	0.0226
71	2.5631	0.0225
72	2.5855	0.0224
73	2.6067	0.0212
74	2.6278	0.0211
75	2.6487	0.0210
76	2.6696	0.0208
77	2.6903	0.0207
78	2.7110	0.0206
79	2.7315	0.0205
80	2.7519	0.0204
81	2.7722	0.0203
82	2.7924	0.0202
83	2.8125	0.0201
84	2.8325	0.0200
85	2.8524	0.0199

86	2.8722	0.0198
87	2.8920	0.0197
88	2.9116	0.0196
89	2.9311	0.0195
90	2.9506	0.0194
91	2.9699	0.0194
92	2.9892	0.0193
93	3.0084	0.0192
94	3.0275	0.0191
95	3.0465	0.0190
96	3.0655	0.0189
97	3.0843	0.0189
98	3.1031	0.0188
99	3.1218	0.0187
100	3.1405	0.0186
101	3.1590	0.0186
102	3.1775	0.0185
103	3.1959	0.0184
104	3.2142	0.0183
105	3.2325	0.0183
106	3.2507	0.0182
107	3.2688	0.0181
108	3.2868	0.0180
109	3.3048	0.0180
110	3.3227	0.0179
111	3.3406	0.0178
112	3.3584	0.0178
113	3.3761	0.0177
114	3.3937	0.0177
115	3.4113	0.0176
116	3.4288	0.0175
117	3.4463	0.0175
118	3.4637	0.0174
119	3.4811	0.0173
120	3.4983	0.0173
121	3.5156	0.0172
122	3.5327	0.0172
123	3.5498	0.0171
124	3.5669	0.0171
125	3.5839	0.0170
126	3.6008	0.0169
127	3.6177	0.0169
128	3.6346	0.0168
129	3.6513	0.0168
130	3.6681	0.0167
131	3.6847	0.0167
132	3.7014	0.0166
133	3.7179	0.0166
134	3.7345	0.0165
135	3.7509	0.0165
136	3.7674	0.0164
137	3.7837	0.0164
138	3.8001	0.0163
139	3.8163	0.0163
140	3.8326	0.0162
141	3.8487	0.0162
142	3.8649	0.0161
143	3.8810	0.0161
144	3.8970	0.0160
145	3.9130	0.0160
146	3.9289	0.0160
147	3.9449	0.0159
148	3.9607	0.0159
149	3.9765	0.0158
150	3.9923	0.0158
151	4.0080	0.0157
152	4.0237	0.0157
153	4.0394	0.0156
154	4.0550	0.0156
155	4.0706	0.0156
156	4.0861	0.0155

157	4.1016	0.0155
158	4.1170	0.0154
159	4.1324	0.0154
160	4.1478	0.0154
161	4.1631	0.0153
162	4.1784	0.0153
163	4.1936	0.0152
164	4.2088	0.0152
165	4.2240	0.0152
166	4.2391	0.0151
167	4.2542	0.0151
168	4.2693	0.0151
169	4.2843	0.0150
170	4.2993	0.0150
171	4.3143	0.0150
172	4.3292	0.0149
173	4.3441	0.0149
174	4.3589	0.0148
175	4.3737	0.0148
176	4.3885	0.0148
177	4.4032	0.0147
178	4.4180	0.0147
179	4.4326	0.0147
180	4.4473	0.0146
181	4.4619	0.0146
182	4.4764	0.0146
183	4.4910	0.0145
184	4.5055	0.0145
185	4.5200	0.0145
186	4.5344	0.0144
187	4.5488	0.0144
188	4.5632	0.0144
189	4.5776	0.0144
190	4.5919	0.0143
191	4.6062	0.0143
192	4.6204	0.0143
193	4.6347	0.0142
194	4.6489	0.0142
195	4.6630	0.0142
196	4.6772	0.0141
197	4.6913	0.0141
198	4.7054	0.0141
199	4.7194	0.0141
200	4.7334	0.0140
201	4.7474	0.0140
202	4.7614	0.0140
203	4.7753	0.0139
204	4.7893	0.0139
205	4.8031	0.0139
206	4.8170	0.0139
207	4.8308	0.0138
208	4.8446	0.0138
209	4.8584	0.0138
210	4.8721	0.0137
211	4.8859	0.0137
212	4.8996	0.0137
213	4.9132	0.0137
214	4.9269	0.0136
215	4.9405	0.0136
216	4.9541	0.0136
217	4.9676	0.0136
218	4.9812	0.0135
219	4.9947	0.0135
220	5.0082	0.0135
221	5.0216	0.0135
222	5.0351	0.0134
223	5.0485	0.0134
224	5.0619	0.0134
225	5.0752	0.0134
226	5.0886	0.0133
227	5.1019	0.0133

228	5.1152	0.0133
229	5.1284	0.0133
230	5.1417	0.0132
231	5.1549	0.0132
232	5.1681	0.0132
233	5.1813	0.0132
234	5.1944	0.0132
235	5.2076	0.0131
236	5.2207	0.0131
237	5.2337	0.0131
238	5.2468	0.0131
239	5.2598	0.0130
240	5.2729	0.0130
241	5.2859	0.0130
242	5.2988	0.0130
243	5.3118	0.0129
244	5.3247	0.0129
245	5.3376	0.0129
246	5.3505	0.0129
247	5.3634	0.0129
248	5.3762	0.0128
249	5.3890	0.0128
250	5.4018	0.0128
251	5.4146	0.0128
252	5.4274	0.0128
253	5.4401	0.0127
254	5.4528	0.0127
255	5.4655	0.0127
256	5.4782	0.0127
257	5.4908	0.0127
258	5.5035	0.0126
259	5.5161	0.0126
260	5.5287	0.0126
261	5.5413	0.0126
262	5.5538	0.0126
263	5.5664	0.0125
264	5.5789	0.0125
265	5.5914	0.0125
266	5.6039	0.0125
267	5.6163	0.0125
268	5.6288	0.0124
269	5.6412	0.0124
270	5.6536	0.0124
271	5.6660	0.0124
272	5.6783	0.0124
273	5.6907	0.0123
274	5.7030	0.0123
275	5.7153	0.0123
276	5.7276	0.0123
277	5.7399	0.0123
278	5.7522	0.0123
279	5.7644	0.0122
280	5.7766	0.0122
281	5.7888	0.0122
282	5.8010	0.0122
283	5.8132	0.0122
284	5.8253	0.0121
285	5.8375	0.0121
286	5.8496	0.0121
287	5.8617	0.0121
288	5.8737	0.0121

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0121	0.0074	0.0046
2	0.0121	0.0075	0.0046
3	0.0121	0.0075	0.0047
4	0.0121	0.0075	0.0047
5	0.0122	0.0075	0.0047

6	0.0122	0.0075	0.0047
7	0.0122	0.0075	0.0047
8	0.0123	0.0076	0.0047
9	0.0123	0.0076	0.0047
10	0.0123	0.0076	0.0047
11	0.0123	0.0076	0.0047
12	0.0124	0.0076	0.0047
13	0.0124	0.0076	0.0048
14	0.0124	0.0077	0.0048
15	0.0125	0.0077	0.0048
16	0.0125	0.0077	0.0048
17	0.0125	0.0077	0.0048
18	0.0125	0.0077	0.0048
19	0.0126	0.0077	0.0048
20	0.0126	0.0078	0.0048
21	0.0126	0.0078	0.0048
22	0.0127	0.0078	0.0049
23	0.0127	0.0078	0.0049
24	0.0127	0.0078	0.0049
25	0.0128	0.0079	0.0049
26	0.0128	0.0079	0.0049
27	0.0128	0.0079	0.0049
28	0.0128	0.0079	0.0049
29	0.0129	0.0079	0.0049
30	0.0129	0.0080	0.0050
31	0.0129	0.0080	0.0050
32	0.0130	0.0080	0.0050
33	0.0130	0.0080	0.0050
34	0.0130	0.0080	0.0050
35	0.0131	0.0081	0.0050
36	0.0131	0.0081	0.0050
37	0.0132	0.0081	0.0050
38	0.0132	0.0081	0.0051
39	0.0132	0.0081	0.0051
40	0.0132	0.0082	0.0051
41	0.0133	0.0082	0.0051
42	0.0133	0.0082	0.0051
43	0.0134	0.0082	0.0051
44	0.0134	0.0082	0.0051
45	0.0134	0.0083	0.0052
46	0.0135	0.0083	0.0052
47	0.0135	0.0083	0.0052
48	0.0135	0.0083	0.0052
49	0.0136	0.0084	0.0052
50	0.0136	0.0084	0.0052
51	0.0137	0.0084	0.0052
52	0.0137	0.0084	0.0053
53	0.0137	0.0085	0.0053
54	0.0138	0.0085	0.0053
55	0.0138	0.0085	0.0053
56	0.0139	0.0085	0.0053
57	0.0139	0.0086	0.0053
58	0.0139	0.0086	0.0053
59	0.0140	0.0086	0.0054
60	0.0140	0.0086	0.0054
61	0.0141	0.0087	0.0054
62	0.0141	0.0087	0.0054
63	0.0142	0.0087	0.0054
64	0.0142	0.0087	0.0054
65	0.0143	0.0088	0.0055
66	0.0143	0.0088	0.0055
67	0.0144	0.0088	0.0055
68	0.0144	0.0089	0.0055
69	0.0144	0.0089	0.0055
70	0.0145	0.0089	0.0056
71	0.0145	0.0090	0.0056
72	0.0146	0.0090	0.0056
73	0.0146	0.0090	0.0056
74	0.0147	0.0090	0.0056
75	0.0147	0.0091	0.0057
76	0.0148	0.0091	0.0057

77	0.0148	0.0091	0.0057
78	0.0149	0.0092	0.0057
79	0.0150	0.0092	0.0057
80	0.0150	0.0092	0.0058
81	0.0151	0.0093	0.0058
82	0.0151	0.0093	0.0058
83	0.0152	0.0093	0.0058
84	0.0152	0.0094	0.0058
85	0.0153	0.0094	0.0059
86	0.0153	0.0094	0.0059
87	0.0154	0.0095	0.0059
88	0.0154	0.0095	0.0059
89	0.0155	0.0096	0.0060
90	0.0156	0.0096	0.0060
91	0.0156	0.0096	0.0060
92	0.0157	0.0097	0.0060
93	0.0158	0.0097	0.0061
94	0.0158	0.0097	0.0061
95	0.0159	0.0098	0.0061
96	0.0160	0.0098	0.0061
97	0.0160	0.0099	0.0062
98	0.0161	0.0099	0.0062
99	0.0162	0.0100	0.0062
100	0.0162	0.0100	0.0062
101	0.0163	0.0101	0.0063
102	0.0164	0.0101	0.0063
103	0.0165	0.0101	0.0063
104	0.0165	0.0102	0.0063
105	0.0166	0.0102	0.0064
106	0.0167	0.0103	0.0064
107	0.0168	0.0103	0.0064
108	0.0168	0.0104	0.0065
109	0.0169	0.0104	0.0065
110	0.0170	0.0105	0.0065
111	0.0171	0.0105	0.0066
112	0.0172	0.0106	0.0066
113	0.0173	0.0107	0.0066
114	0.0173	0.0107	0.0067
115	0.0175	0.0108	0.0067
116	0.0175	0.0108	0.0067
117	0.0177	0.0109	0.0068
118	0.0177	0.0109	0.0068
119	0.0178	0.0110	0.0068
120	0.0179	0.0110	0.0069
121	0.0180	0.0111	0.0069
122	0.0181	0.0112	0.0070
123	0.0183	0.0113	0.0070
124	0.0183	0.0113	0.0070
125	0.0185	0.0114	0.0071
126	0.0186	0.0114	0.0071
127	0.0187	0.0115	0.0072
128	0.0188	0.0116	0.0072
129	0.0189	0.0117	0.0073
130	0.0190	0.0117	0.0073
131	0.0192	0.0118	0.0074
132	0.0193	0.0119	0.0074
133	0.0194	0.0120	0.0075
134	0.0195	0.0120	0.0075
135	0.0197	0.0122	0.0076
136	0.0198	0.0122	0.0076
137	0.0200	0.0123	0.0077
138	0.0201	0.0124	0.0077
139	0.0203	0.0125	0.0078
140	0.0204	0.0126	0.0078
141	0.0206	0.0127	0.0079
142	0.0207	0.0128	0.0080
143	0.0210	0.0129	0.0080
144	0.0211	0.0130	0.0081
145	0.0224	0.0138	0.0086
146	0.0225	0.0139	0.0086
147	0.0227	0.0140	0.0087

148	0.0229	0.0141	0.0088
149	0.0231	0.0142	0.0089
150	0.0233	0.0143	0.0089
151	0.0235	0.0145	0.0090
152	0.0237	0.0146	0.0091
153	0.0240	0.0148	0.0092
154	0.0241	0.0149	0.0093
155	0.0245	0.0151	0.0094
156	0.0246	0.0152	0.0094
157	0.0250	0.0154	0.0096
158	0.0251	0.0155	0.0097
159	0.0255	0.0157	0.0098
160	0.0257	0.0158	0.0099
161	0.0261	0.0161	0.0100
162	0.0263	0.0162	0.0101
163	0.0268	0.0165	0.0103
164	0.0270	0.0166	0.0104
165	0.0275	0.0169	0.0105
166	0.0277	0.0171	0.0106
167	0.0283	0.0174	0.0109
168	0.0286	0.0176	0.0110
169	0.0292	0.0180	0.0112
170	0.0295	0.0182	0.0113
171	0.0302	0.0186	0.0116
172	0.0305	0.0188	0.0117
173	0.0313	0.0193	0.0120
174	0.0317	0.0195	0.0122
175	0.0326	0.0201	0.0125
176	0.0331	0.0204	0.0127
177	0.0341	0.0210	0.0131
178	0.0347	0.0214	0.0133
179	0.0359	0.0221	0.0138
180	0.0366	0.0226	0.0140
181	0.0381	0.0235	0.0146
182	0.0390	0.0240	0.0150
183	0.0409	0.0252	0.0157
184	0.0421	0.0259	0.0161
185	0.0219	0.0135	0.0084
186	0.0233	0.0144	0.0090
187	0.0270	0.0167	0.0104
188	0.0295	0.0182	0.0113
189	0.0367	0.0226	0.0141
190	0.0423	0.0261	0.0162
191	0.0642	0.0395	0.0246
192	0.0931	0.0500	0.0431
193	0.4030	0.0500	0.3530
194	0.0505	0.0311	0.0194
195	0.0326	0.0201	0.0125
196	0.0250	0.0154	0.0096
197	0.0433	0.0267	0.0166
198	0.0399	0.0246	0.0153
199	0.0373	0.0230	0.0143
200	0.0353	0.0217	0.0135
201	0.0336	0.0207	0.0129
202	0.0321	0.0198	0.0123
203	0.0309	0.0190	0.0119
204	0.0298	0.0184	0.0114
205	0.0289	0.0178	0.0111
206	0.0280	0.0173	0.0107
207	0.0272	0.0168	0.0105
208	0.0265	0.0164	0.0102
209	0.0259	0.0160	0.0099
210	0.0253	0.0156	0.0097
211	0.0248	0.0153	0.0095
212	0.0243	0.0150	0.0093
213	0.0238	0.0147	0.0091
214	0.0234	0.0144	0.0090
215	0.0230	0.0142	0.0088
216	0.0226	0.0139	0.0087
217	0.0212	0.0131	0.0081
218	0.0208	0.0128	0.0080

219	0.0205	0.0126	0.0079
220	0.0202	0.0125	0.0078
221	0.0199	0.0123	0.0076
222	0.0196	0.0121	0.0075
223	0.0194	0.0119	0.0074
224	0.0191	0.0118	0.0073
225	0.0189	0.0116	0.0072
226	0.0186	0.0115	0.0071
227	0.0184	0.0113	0.0071
228	0.0182	0.0112	0.0070
229	0.0180	0.0111	0.0069
230	0.0178	0.0110	0.0068
231	0.0176	0.0108	0.0068
232	0.0174	0.0107	0.0067
233	0.0172	0.0106	0.0066
234	0.0171	0.0105	0.0065
235	0.0169	0.0104	0.0065
236	0.0167	0.0103	0.0064
237	0.0166	0.0102	0.0064
238	0.0164	0.0101	0.0063
239	0.0163	0.0100	0.0062
240	0.0161	0.0099	0.0062
241	0.0160	0.0099	0.0061
242	0.0159	0.0098	0.0061
243	0.0157	0.0097	0.0060
244	0.0156	0.0096	0.0060
245	0.0155	0.0095	0.0059
246	0.0154	0.0095	0.0059
247	0.0152	0.0094	0.0059
248	0.0151	0.0093	0.0058
249	0.0150	0.0093	0.0058
250	0.0149	0.0092	0.0057
251	0.0148	0.0091	0.0057
252	0.0147	0.0091	0.0056
253	0.0146	0.0090	0.0056
254	0.0145	0.0089	0.0056
255	0.0144	0.0089	0.0055
256	0.0143	0.0088	0.0055
257	0.0142	0.0088	0.0055
258	0.0141	0.0087	0.0054
259	0.0141	0.0087	0.0054
260	0.0140	0.0086	0.0054
261	0.0139	0.0086	0.0053
262	0.0138	0.0085	0.0053
263	0.0137	0.0085	0.0053
264	0.0136	0.0084	0.0052
265	0.0136	0.0084	0.0052
266	0.0135	0.0083	0.0052
267	0.0134	0.0083	0.0051
268	0.0133	0.0082	0.0051
269	0.0133	0.0082	0.0051
270	0.0132	0.0081	0.0051
271	0.0131	0.0081	0.0050
272	0.0131	0.0080	0.0050
273	0.0130	0.0080	0.0050
274	0.0129	0.0080	0.0050
275	0.0129	0.0079	0.0049
276	0.0128	0.0079	0.0049
277	0.0127	0.0078	0.0049
278	0.0127	0.0078	0.0049
279	0.0126	0.0078	0.0048
280	0.0126	0.0077	0.0048
281	0.0125	0.0077	0.0048
282	0.0124	0.0077	0.0048
283	0.0124	0.0076	0.0048
284	0.0123	0.0076	0.0047
285	0.0123	0.0076	0.0047
286	0.0122	0.0075	0.0047
287	0.0122	0.0075	0.0047
288	0.0121	0.0075	0.0046

```
      ------------------------------------------------------------------------
      Total soil rain loss =      3.41(In)
      Total effective rainfall =      2.46(In)
      Peak flow rate in flood hydrograph =     12.62(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0002      0.03  Q         |         |         |         |
  0+10       0.0014      0.17  Q         |         |         |         |
  0+15       0.0033      0.28  Q         |         |         |         |
  0+20       0.0055      0.32  Q         |         |         |         |
  0+25       0.0079      0.35  Q         |         |         |         |
  0+30       0.0104      0.36  Q         |         |         |         |
  0+35       0.0129      0.36  Q         |         |         |         |
  0+40       0.0154      0.37  Q         |         |         |         |
  0+45       0.0179      0.37  Q         |         |         |         |
  0+50       0.0205      0.37  Q         |         |         |         |
  0+55       0.0231      0.37  Q         |         |         |         |
  1+ 0       0.0257      0.37  Q         |         |         |         |
  1+ 5       0.0282      0.37  Q         |         |         |         |
  1+10       0.0308      0.38  Q         |         |         |         |
  1+15       0.0334      0.38  Q         |         |         |         |
  1+20       0.0360      0.38  QV        |         |         |         |
  1+25       0.0386      0.38  QV        |         |         |         |
  1+30       0.0412      0.38  QV        |         |         |         |
  1+35       0.0438      0.38  QV        |         |         |         |
  1+40       0.0465      0.38  QV        |         |         |         |
  1+45       0.0491      0.38  QV        |         |         |         |
  1+50       0.0517      0.38  QV        |         |         |         |
  1+55       0.0544      0.38  QV        |         |         |         |
  2+ 0       0.0570      0.38  QV        |         |         |         |
  2+ 5       0.0597      0.39  QV        |         |         |         |
  2+10       0.0623      0.39  QV        |         |         |         |
  2+15       0.0650      0.39  QV        |         |         |         |
  2+20       0.0677      0.39  Q V       |         |         |         |
  2+25       0.0704      0.39  Q V       |         |         |         |
  2+30       0.0730      0.39  Q V       |         |         |         |
  2+35       0.0757      0.39  Q V       |         |         |         |
  2+40       0.0784      0.39  Q V       |         |         |         |
  2+45       0.0811      0.39  Q V       |         |         |         |
  2+50       0.0839      0.39  Q V       |         |         |         |
  2+55       0.0866      0.39  Q V       |         |         |         |
  3+ 0       0.0893      0.40  Q V       |         |         |         |
  3+ 5       0.0920      0.40  Q V       |         |         |         |
  3+10       0.0948      0.40  Q V       |         |         |         |
  3+15       0.0975      0.40  Q V       |         |         |         |
  3+20       0.1003      0.40  Q V       |         |         |         |
  3+25       0.1030      0.40  Q  V      |         |         |         |
  3+30       0.1058      0.40  Q  V      |         |         |         |
  3+35       0.1086      0.40  Q  V      |         |         |         |
  3+40       0.1114      0.40  Q  V      |         |         |         |
  3+45       0.1142      0.41  Q  V      |         |         |         |
  3+50       0.1170      0.41  Q  V      |         |         |         |
  3+55       0.1198      0.41  Q  V      |         |         |         |
  4+ 0       0.1226      0.41  Q  V      |         |         |         |
  4+ 5       0.1254      0.41  Q  V      |         |         |         |
  4+10       0.1283      0.41  Q  V      |         |         |         |
  4+15       0.1311      0.41  Q  V      |         |         |         |
  4+20       0.1339      0.41  Q  V      |         |         |         |
  4+25       0.1368      0.41  Q   V     |         |         |         |
  4+30       0.1397      0.42  Q   V     |         |         |         |
  4+35       0.1425      0.42  Q   V     |         |         |         |
  4+40       0.1454      0.42  Q   V     |         |         |         |
  4+45       0.1483      0.42  Q   V     |         |         |         |
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 4+50      0.1512      0.42  Q   V     |          |          |          |
 4+55      0.1541      0.42  Q   V     |          |          |          |
 5+ 0      0.1570      0.42  Q   V     |          |          |          |
 5+ 5      0.1600      0.42  Q   V     |          |          |          |
 5+10      0.1629      0.43  Q   V     |          |          |          |
 5+15      0.1658      0.43  Q   V     |          |          |          |
 5+20      0.1688      0.43  Q    V    |          |          |          |
 5+25      0.1717      0.43  Q    V    |          |          |          |
 5+30      0.1747      0.43  Q    V    |          |          |          |
 5+35      0.1777      0.43  Q    V    |          |          |          |
 5+40      0.1807      0.43  Q    V    |          |          |          |
 5+45      0.1837      0.44  Q    V    |          |          |          |
 5+50      0.1867      0.44  Q    V    |          |          |          |
 5+55      0.1897      0.44  Q    V    |          |          |          |
 6+ 0      0.1927      0.44  Q    V    |          |          |          |
 6+ 5      0.1958      0.44  Q    V    |          |          |          |
 6+10      0.1988      0.44  Q    V    |          |          |          |
 6+15      0.2019      0.44  Q     V   |          |          |          |
 6+20      0.2050      0.45  Q     V   |          |          |          |
 6+25      0.2080      0.45  Q     V   |          |          |          |
 6+30      0.2111      0.45  Q     V   |          |          |          |
 6+35      0.2142      0.45  Q     V   |          |          |          |
 6+40      0.2173      0.45  Q     V   |          |          |          |
 6+45      0.2205      0.45  Q     V   |          |          |          |
 6+50      0.2236      0.46  Q     V   |          |          |          |
 6+55      0.2268      0.46  Q     V   |          |          |          |
 7+ 0      0.2299      0.46  Q     V   |          |          |          |
 7+ 5      0.2331      0.46  Q     V   |          |          |          |
 7+10      0.2363      0.46  Q      V  |          |          |          |
 7+15      0.2395      0.46  Q      V  |          |          |          |
 7+20      0.2427      0.47  Q      V  |          |          |          |
 7+25      0.2459      0.47  Q      V  |          |          |          |
 7+30      0.2491      0.47  Q      V  |          |          |          |
 7+35      0.2524      0.47  Q      V  |          |          |          |
 7+40      0.2556      0.47  Q      V  |          |          |          |
 7+45      0.2589      0.47  Q      V  |          |          |          |
 7+50      0.2622      0.48  Q      V  |          |          |          |
 7+55      0.2655      0.48  Q      V  |          |          |          |
 8+ 0      0.2688      0.48  Q       V |          |          |          |
 8+ 5      0.2721      0.48  Q       V |          |          |          |
 8+10      0.2754      0.48  Q       V |          |          |          |
 8+15      0.2788      0.49  Q       V |          |          |          |
 8+20      0.2822      0.49  Q       V |          |          |          |
 8+25      0.2855      0.49  Q       V |          |          |          |
 8+30      0.2889      0.49  Q       V |          |          |          |
 8+35      0.2924      0.50  Q       V |          |          |          |
 8+40      0.2958      0.50  Q       V |          |          |          |
 8+45      0.2992      0.50  Q       V |          |          |          |
 8+50      0.3027      0.50  |Q       V|          |          |          |
 8+55      0.3062      0.50  |Q       V|          |          |          |
 9+ 0      0.3096      0.51  |Q       V|          |          |          |
 9+ 5      0.3131      0.51  |Q       V|          |          |          |
 9+10      0.3167      0.51  |Q       V|          |          |          |
 9+15      0.3202      0.51  |Q       V|          |          |          |
 9+20      0.3238      0.52  |Q       V|          |          |          |
 9+25      0.3273      0.52  |Q       V|          |          |          |
 9+30      0.3309      0.52  |Q       V|          |          |          |
 9+35      0.3346      0.52  |Q       V|          |          |          |
 9+40      0.3382      0.53  |Q        V          |          |          |
 9+45      0.3418      0.53  |Q        V          |          |          |
 9+50      0.3455      0.53  |Q        V          |          |          |
 9+55      0.3492      0.54  |Q        V          |          |          |
10+ 0      0.3529      0.54  |Q        V          |          |          |
10+ 5      0.3566      0.54  |Q        V          |          |          |
10+10      0.3604      0.54  |Q        V          |          |          |
10+15      0.3641      0.55  |Q        V          |          |          |
10+20      0.3679      0.55  |Q        V          |          |          |
10+25      0.3718      0.55  |Q        |V         |          |          |
10+30      0.3756      0.56  |Q        |V         |          |          |
10+35      0.3795      0.56  |Q        |V         |          |          |
10+40      0.3833      0.56  |Q        |V         |          |          |
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10+45       0.3872      0.57  |Q        |V        |         |         |
10+50       0.3912      0.57  |Q        |V        |         |         |
10+55       0.3951      0.57  |Q        |V        |         |         |
11+ 0       0.3991      0.58  |Q        |V        |         |         |
11+ 5       0.4031      0.58  |Q        | V       |         |         |
11+10       0.4072      0.59  |Q        | V       |         |         |
11+15       0.4112      0.59  |Q        | V       |         |         |
11+20       0.4153      0.59  |Q        | V       |         |         |
11+25       0.4194      0.60  |Q        | V       |         |         |
11+30       0.4236      0.60  |Q        | V       |         |         |
11+35       0.4278      0.61  |Q        | V       |         |         |
11+40       0.4320      0.61  |Q        | V       |         |         |
11+45       0.4362      0.62  |Q        |  V      |         |         |
11+50       0.4405      0.62  |Q        |  V      |         |         |
11+55       0.4448      0.63  |Q        |  V      |         |         |
12+ 0       0.4492      0.63  |Q        |  V      |         |         |
12+ 5       0.4536      0.64  |Q        |  V      |         |         |
12+10       0.4581      0.66  |Q        |  V      |         |         |
12+15       0.4627      0.67  |Q        |  V      |         |         |
12+20       0.4674      0.68  |Q        |  V      |         |         |
12+25       0.4721      0.69  |Q        |   V     |         |         |
12+30       0.4769      0.69  |Q        |   V     |         |         |
12+35       0.4817      0.70  |Q        |   V     |         |         |
12+40       0.4866      0.71  |Q        |   V     |         |         |
12+45       0.4915      0.71  |Q        |   V     |         |         |
12+50       0.4965      0.72  |Q        |   V     |         |         |
12+55       0.5015      0.73  |Q        |   V     |         |         |
13+ 0       0.5065      0.73  |Q        |    V    |         |         |
13+ 5       0.5116      0.74  |Q        |    V    |         |         |
13+10       0.5168      0.75  |Q        |    V    |         |         |
13+15       0.5220      0.76  |Q        |    V    |         |         |
13+20       0.5273      0.77  |Q        |    V    |         |         |
13+25       0.5326      0.77  |Q        |    V    |         |         |
13+30       0.5380      0.78  |Q        |     V   |         |         |
13+35       0.5435      0.79  |Q        |     V   |         |         |
13+40       0.5490      0.80  |Q        |     V   |         |         |
13+45       0.5546      0.81  |Q        |     V   |         |         |
13+50       0.5603      0.82  |Q        |     V   |         |         |
13+55       0.5660      0.83  |Q        |     V   |         |         |
14+ 0       0.5718      0.85  |Q        |      V  |         |         |
14+ 5       0.5777      0.86  |Q        |      V  |         |         |
14+10       0.5837      0.87  |Q        |      V  |         |         |
14+15       0.5898      0.88  |Q        |      V  |         |         |
14+20       0.5960      0.90  |Q        |      V  |         |         |
14+25       0.6023      0.91  |Q        |      V  |         |         |
14+30       0.6087      0.93  |Q        |       V |         |         |
14+35       0.6153      0.95  |Q        |       V |         |         |
14+40       0.6219      0.97  |Q        |       V |         |         |
14+45       0.6287      0.99  |Q        |       V |         |         |
14+50       0.6357      1.01  | Q       |       V |         |         |
14+55       0.6428      1.03  | Q       |        V|         |         |
15+ 0       0.6501      1.06  | Q       |        V|         |         |
15+ 5       0.6576      1.09  | Q       |        V|         |         |
15+10       0.6654      1.12  | Q       |        V|         |         |
15+15       0.6733      1.16  | Q       |         V         |         |
15+20       0.6816      1.20  | Q       |         V         |         |
15+25       0.6898      1.19  | Q       |         V         |         |
15+30       0.6965      0.97  |Q        |         V         |         |
15+35       0.7022      0.83  |Q        |         V         |         |
15+40       0.7079      0.83  |Q        |         |V        |         |
15+45       0.7139      0.87  |Q        |         |V        |         |
15+50       0.7208      0.99  |Q        |         |V        |         |
15+55       0.7289      1.18  | Q       |         |V        |         |
16+ 0       0.7401      1.63  |  Q      |         | V       |         |
16+ 5       0.7686      4.14  |       Q |         | V       |         |
16+10       0.8555     12.62  |         |         |    Q    |         |
16+15       0.9212      9.55  |         |        Q|      V  |         |
16+20       0.9509      4.31  |       Q |         |       V |         |
16+25       0.9698      2.74  |    Q    |         |       V |         |
16+30       0.9838      2.03  |   Q     |         |        V|         |
16+35       0.9944      1.54  |  Q      |         |        V|         |
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16+40       1.0036      1.33  | Q       |         |         V|         |
16+45       1.0122      1.25  | Q       |         |          V         |
16+50       1.0202      1.16  | Q       |         |          V         |
16+55       1.0274      1.05  | Q       |         |          V         |
17+ 0       1.0341      0.98  |Q        |         |          V         |
17+ 5       1.0406      0.94  |Q        |         |          |V        |
17+10       1.0468      0.91  |Q        |         |          |V        |
17+15       1.0529      0.88  |Q        |         |          |V        |
17+20       1.0588      0.85  |Q        |         |          |V        |
17+25       1.0645      0.83  |Q        |         |          |V        |
17+30       1.0700      0.81  |Q        |         |          |V        |
17+35       1.0754      0.79  |Q        |         |          | V       |
17+40       1.0807      0.77  |Q        |         |          | V       |
17+45       1.0859      0.75  |Q        |         |          | V       |
17+50       1.0910      0.74  |Q        |         |          | V       |
17+55       1.0960      0.72  |Q        |         |          | V       |
18+ 0       1.1009      0.71  |Q        |         |          | V       |
18+ 5       1.1057      0.70  |Q        |         |          |  V      |
18+10       1.1103      0.67  |Q        |         |          |  V      |
18+15       1.1148      0.65  |Q        |         |          |  V      |
18+20       1.1192      0.64  |Q        |         |          |  V      |
18+25       1.1235      0.62  |Q        |         |          |  V      |
18+30       1.1277      0.61  |Q        |         |          |  V      |
18+35       1.1319      0.60  |Q        |         |          |  V      |
18+40       1.1360      0.60  |Q        |         |          |  V      |
18+45       1.1400      0.59  |Q        |         |          |   V     |
18+50       1.1440      0.58  |Q        |         |          |   V     |
18+55       1.1480      0.57  |Q        |         |          |   V     |
19+ 0       1.1519      0.57  |Q        |         |          |   V     |
19+ 5       1.1557      0.56  |Q        |         |          |   V     |
19+10       1.1595      0.55  |Q        |         |          |   V     |
19+15       1.1633      0.55  |Q        |         |          |   V     |
19+20       1.1670      0.54  |Q        |         |          |   V     |
19+25       1.1707      0.53  |Q        |         |          |   V     |
19+30       1.1743      0.53  |Q        |         |          |    V    |
19+35       1.1779      0.52  |Q        |         |          |    V    |
19+40       1.1815      0.52  |Q        |         |          |    V    |
19+45       1.1850      0.51  |Q        |         |          |    V    |
19+50       1.1885      0.51  |Q        |         |          |    V    |
19+55       1.1919      0.50  |Q        |         |          |    V    |
20+ 0       1.1954      0.50  Q         |         |          |    V    |
20+ 5       1.1988      0.49  Q         |         |          |    V    |
20+10       1.2022      0.49  Q         |         |          |    V    |
20+15       1.2055      0.49  Q         |         |          |    V    |
20+20       1.2088      0.48  Q         |         |          |     V   |
20+25       1.2121      0.48  Q         |         |          |     V   |
20+30       1.2154      0.47  Q         |         |          |     V   |
20+35       1.2186      0.47  Q         |         |          |     V   |
20+40       1.2218      0.47  Q         |         |          |     V   |
20+45       1.2250      0.46  Q         |         |          |     V   |
20+50       1.2282      0.46  Q         |         |          |     V   |
20+55       1.2313      0.46  Q         |         |          |     V   |
21+ 0       1.2344      0.45  Q         |         |          |     V   |
21+ 5       1.2375      0.45  Q         |         |          |     V   |
21+10       1.2406      0.45  Q         |         |          |      V  |
21+15       1.2436      0.44  Q         |         |          |      V  |
21+20       1.2467      0.44  Q         |         |          |      V  |
21+25       1.2497      0.44  Q         |         |          |      V  |
21+30       1.2527      0.43  Q         |         |          |      V  |
21+35       1.2557      0.43  Q         |         |          |      V  |
21+40       1.2586      0.43  Q         |         |          |      V  |
21+45       1.2615      0.43  Q         |         |          |      V  |
21+50       1.2645      0.42  Q         |         |          |      V  |
21+55       1.2674      0.42  Q         |         |          |      V  |
22+ 0       1.2702      0.42  Q         |         |          |      V  |
22+ 5       1.2731      0.42  Q         |         |          |       V |
22+10       1.2760      0.41  Q         |         |          |       V |
22+15       1.2788      0.41  Q         |         |          |       V |
22+20       1.2816      0.41  Q         |         |          |       V |
22+25       1.2844      0.41  Q         |         |          |       V |
22+30       1.2872      0.40  Q         |         |          |       V |
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   22+35       1.2900      0.40  Q          |          |          |       V |
   22+40       1.2927      0.40  Q          |          |          |       V |
   22+45       1.2955      0.40  Q          |          |          |       V |
   22+50       1.2982      0.40  Q          |          |          |       V |
   22+55       1.3009      0.39  Q          |          |          |       V |
   23+ 0       1.3036      0.39  Q          |          |          |       V |
   23+ 5       1.3063      0.39  Q          |          |          |       V |
   23+10       1.3090      0.39  Q          |          |          |        V|
   23+15       1.3117      0.39  Q          |          |          |        V|
   23+20       1.3143      0.38  Q          |          |          |        V|
   23+25       1.3169      0.38  Q          |          |          |        V|
   23+30       1.3196      0.38  Q          |          |          |        V|
   23+35       1.3222      0.38  Q          |          |          |        V|
   23+40       1.3248      0.38  Q          |          |          |        V|
   23+45       1.3274      0.38  Q          |          |          |        V|
   23+50       1.3300      0.37  Q          |          |          |        V|
   23+55       1.3325      0.37  Q          |          |          |        V|
   24+ 0       1.3351      0.37  Q          |          |          |        V|
   24+ 5       1.3374      0.34  Q          |          |          |        V|
   24+10       1.3388      0.20  Q          |          |          |        V|
   24+15       1.3394      0.09  Q          |          |          |        V|
   24+20       1.3397      0.05  Q          |          |          |        V|
   24+25       1.3399      0.02  Q          |          |          |        V|
   24+30       1.3399      0.01  Q          |          |          |        V|
   24+35       1.3400      0.01  Q          |          |          |        V|
   24+40       1.3400      0.00  Q          |          |          |        V|
   24+45       1.3400      0.00  Q          |          |          |        V|
   24+50       1.3400      0.00  Q          |          |          |         V
-------------------------------------------------------------------------
```

Area 'C' – 10 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
10 YEAR 24 HOUR STORM
DECEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 10

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.54            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.54            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.54           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.54            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.54            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.54           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 32.0      32.0          6.54      1.000     0.978    0.600    0.587

Area-averaged adjusted loss rate Fm (In/Hr) =  0.587

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
3.92	0.600	32.0	32.0	21.25	0.052
2.62	0.400	98.0	98.0	0.20	0.967

Area-averaged catchment yield fraction, Y = 0.418
Area-averaged low loss fraction, Yb = 0.582
User entry of time of concentration = 0.152 (hours)
++
Watershed area = 6.54(Ac.)
Catchment Lag time = 0.121 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 68.6210
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.587(In/Hr)
Average low loss rate fraction (Yb) = 0.582 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.475(In)
Computed peak 30-minute rainfall = 0.812(In)
Specified peak 1-hour rainfall = 1.000(In)
Computed peak 3-hour rainfall = 1.973(In)
Specified peak 6-hour rainfall = 3.029(In)
Specified peak 24-hour rainfall = 7.291(In)

Rainfall depth area reduction factors:
Using a total area of 6.54(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.474(In)
30-minute factor = 1.000 Adjusted rainfall = 0.812(In)
1-hour factor = 1.000 Adjusted rainfall = 1.000(In)
3-hour factor = 1.000 Adjusted rainfall = 1.973(In)
6-hour factor = 1.000 Adjusted rainfall = 3.028(In)
24-hour factor = 1.000 Adjusted rainfall = 7.291(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 79.09 (CFS))	
1	6.926	5.478
2	46.826	31.558
3	76.548	23.508
4	87.652	8.782
5	93.849	4.901
6	97.160	2.619
7	98.439	1.012
8	99.077	0.504
9	99.557	0.380
10	99.888	0.262
11	100.000	0.088

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4744	0.4744
2	0.5840	0.1096
3	0.6596	0.0755
4	0.7190	0.0595
5	0.7688	0.0498
6	0.8120	0.0432
7	0.8504	0.0384
8	0.8852	0.0348
9	0.9170	0.0318
10	0.9465	0.0294
11	0.9739	0.0275
12	0.9997	0.0258
13	1.0504	0.0508
14	1.0997	0.0493

15	1.1477	0.0480
16	1.1944	0.0468
17	1.2401	0.0457
18	1.2847	0.0446
19	1.3284	0.0437
20	1.3713	0.0428
21	1.4133	0.0420
22	1.4545	0.0413
23	1.4951	0.0406
24	1.5350	0.0399
25	1.5743	0.0393
26	1.6129	0.0387
27	1.6510	0.0381
28	1.6886	0.0376
29	1.7256	0.0371
30	1.7622	0.0366
31	1.7983	0.0361
32	1.8340	0.0357
33	1.8693	0.0352
34	1.9041	0.0348
35	1.9386	0.0345
36	1.9726	0.0341
37	2.0064	0.0337
38	2.0397	0.0334
39	2.0728	0.0330
40	2.1055	0.0327
41	2.1379	0.0324
42	2.1700	0.0321
43	2.2018	0.0318
44	2.2333	0.0315
45	2.2646	0.0313
46	2.2955	0.0310
47	2.3263	0.0307
48	2.3568	0.0305
49	2.3870	0.0302
50	2.4170	0.0300
51	2.4468	0.0298
52	2.4764	0.0296
53	2.5057	0.0293
54	2.5349	0.0291
55	2.5638	0.0289
56	2.5925	0.0287
57	2.6210	0.0285
58	2.6494	0.0283
59	2.6775	0.0282
60	2.7055	0.0280
61	2.7333	0.0278
62	2.7610	0.0276
63	2.7884	0.0275
64	2.8157	0.0273
65	2.8428	0.0271
66	2.8698	0.0270
67	2.8966	0.0268
68	2.9233	0.0267
69	2.9498	0.0265
70	2.9762	0.0264
71	3.0024	0.0262
72	3.0285	0.0261
73	3.0550	0.0266
74	3.0815	0.0265
75	3.1078	0.0263
76	3.1340	0.0262
77	3.1601	0.0261
78	3.1861	0.0259
79	3.2119	0.0258
80	3.2376	0.0257
81	3.2632	0.0256
82	3.2887	0.0255
83	3.3140	0.0254
84	3.3393	0.0253
85	3.3644	0.0251

86	3.3894	0.0250
87	3.4144	0.0249
88	3.4392	0.0248
89	3.4639	0.0247
90	3.4885	0.0246
91	3.5130	0.0245
92	3.5375	0.0244
93	3.5618	0.0243
94	3.5860	0.0242
95	3.6101	0.0241
96	3.6342	0.0240
97	3.6581	0.0239
98	3.6820	0.0239
99	3.7057	0.0238
100	3.7294	0.0237
101	3.7530	0.0236
102	3.7765	0.0235
103	3.8000	0.0234
104	3.8233	0.0233
105	3.8466	0.0233
106	3.8697	0.0232
107	3.8928	0.0231
108	3.9158	0.0230
109	3.9388	0.0229
110	3.9617	0.0229
111	3.9844	0.0228
112	4.0072	0.0227
113	4.0298	0.0226
114	4.0524	0.0226
115	4.0749	0.0225
116	4.0973	0.0224
117	4.1196	0.0224
118	4.1419	0.0223
119	4.1641	0.0222
120	4.1863	0.0221
121	4.2083	0.0221
122	4.2303	0.0220
123	4.2523	0.0219
124	4.2742	0.0219
125	4.2960	0.0218
126	4.3177	0.0218
127	4.3394	0.0217
128	4.3610	0.0216
129	4.3826	0.0216
130	4.4041	0.0215
131	4.4256	0.0214
132	4.4469	0.0214
133	4.4683	0.0213
134	4.4895	0.0213
135	4.5107	0.0212
136	4.5319	0.0211
137	4.5530	0.0211
138	4.5740	0.0210
139	4.5950	0.0210
140	4.6159	0.0209
141	4.6368	0.0209
142	4.6576	0.0208
143	4.6783	0.0208
144	4.6991	0.0207
145	4.7197	0.0207
146	4.7403	0.0206
147	4.7609	0.0206
148	4.7814	0.0205
149	4.8018	0.0205
150	4.8222	0.0204
151	4.8426	0.0204
152	4.8629	0.0203
153	4.8831	0.0203
154	4.9033	0.0202
155	4.9235	0.0202
156	4.9436	0.0201

157	4.9636	0.0201
158	4.9837	0.0200
159	5.0036	0.0200
160	5.0236	0.0199
161	5.0434	0.0199
162	5.0633	0.0198
163	5.0830	0.0198
164	5.1028	0.0197
165	5.1225	0.0197
166	5.1421	0.0197
167	5.1618	0.0196
168	5.1813	0.0196
169	5.2008	0.0195
170	5.2203	0.0195
171	5.2398	0.0194
172	5.2592	0.0194
173	5.2785	0.0194
174	5.2978	0.0193
175	5.3171	0.0193
176	5.3364	0.0192
177	5.3556	0.0192
178	5.3747	0.0192
179	5.3938	0.0191
180	5.4129	0.0191
181	5.4319	0.0190
182	5.4510	0.0190
183	5.4699	0.0190
184	5.4888	0.0189
185	5.5077	0.0189
186	5.5266	0.0189
187	5.5454	0.0188
188	5.5642	0.0188
189	5.5829	0.0187
190	5.6016	0.0187
191	5.6203	0.0187
192	5.6389	0.0186
193	5.6575	0.0186
194	5.6761	0.0186
195	5.6946	0.0185
196	5.7131	0.0185
197	5.7315	0.0185
198	5.7500	0.0184
199	5.7683	0.0184
200	5.7867	0.0184
201	5.8050	0.0183
202	5.8233	0.0183
203	5.8416	0.0183
204	5.8598	0.0182
205	5.8780	0.0182
206	5.8961	0.0182
207	5.9143	0.0181
208	5.9323	0.0181
209	5.9504	0.0181
210	5.9684	0.0180
211	5.9864	0.0180
212	6.0044	0.0180
213	6.0223	0.0179
214	6.0402	0.0179
215	6.0581	0.0179
216	6.0760	0.0178
217	6.0938	0.0178
218	6.1116	0.0178
219	6.1293	0.0178
220	6.1470	0.0177
221	6.1647	0.0177
222	6.1824	0.0177
223	6.2000	0.0176
224	6.2176	0.0176
225	6.2352	0.0176
226	6.2528	0.0175
227	6.2703	0.0175

228	6.2878	0.0175
229	6.3052	0.0175
230	6.3227	0.0174
231	6.3401	0.0174
232	6.3575	0.0174
233	6.3748	0.0174
234	6.3921	0.0173
235	6.4094	0.0173
236	6.4267	0.0173
237	6.4440	0.0172
238	6.4612	0.0172
239	6.4784	0.0172
240	6.4955	0.0172
241	6.5127	0.0171
242	6.5298	0.0171
243	6.5469	0.0171
244	6.5639	0.0171
245	6.5810	0.0170
246	6.5980	0.0170
247	6.6150	0.0170
248	6.6319	0.0170
249	6.6489	0.0169
250	6.6658	0.0169
251	6.6827	0.0169
252	6.6995	0.0169
253	6.7164	0.0168
254	6.7332	0.0168
255	6.7500	0.0168
256	6.7667	0.0168
257	6.7835	0.0167
258	6.8002	0.0167
259	6.8169	0.0167
260	6.8336	0.0167
261	6.8502	0.0166
262	6.8668	0.0166
263	6.8834	0.0166
264	6.9000	0.0166
265	6.9166	0.0166
266	6.9331	0.0165
267	6.9496	0.0165
268	6.9661	0.0165
269	6.9825	0.0165
270	6.9990	0.0164
271	7.0154	0.0164
272	7.0318	0.0164
273	7.0482	0.0164
274	7.0645	0.0164
275	7.0809	0.0163
276	7.0972	0.0163
277	7.1134	0.0163
278	7.1297	0.0163
279	7.1460	0.0162
280	7.1622	0.0162
281	7.1784	0.0162
282	7.1946	0.0162
283	7.2107	0.0162
284	7.2269	0.0161
285	7.2430	0.0161
286	7.2591	0.0161
287	7.2751	0.0161
288	7.2912	0.0161

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0161	0.0093	0.0067
2	0.0161	0.0094	0.0067
3	0.0161	0.0094	0.0067
4	0.0161	0.0094	0.0067
5	0.0162	0.0094	0.0068

6	0.0162	0.0094	0.0068
7	0.0162	0.0095	0.0068
8	0.0163	0.0095	0.0068
9	0.0163	0.0095	0.0068
10	0.0163	0.0095	0.0068
11	0.0164	0.0095	0.0068
12	0.0164	0.0095	0.0069
13	0.0164	0.0096	0.0069
14	0.0165	0.0096	0.0069
15	0.0165	0.0096	0.0069
16	0.0165	0.0096	0.0069
17	0.0166	0.0096	0.0069
18	0.0166	0.0097	0.0069
19	0.0166	0.0097	0.0070
20	0.0167	0.0097	0.0070
21	0.0167	0.0097	0.0070
22	0.0167	0.0097	0.0070
23	0.0168	0.0098	0.0070
24	0.0168	0.0098	0.0070
25	0.0169	0.0098	0.0071
26	0.0169	0.0098	0.0071
27	0.0169	0.0099	0.0071
28	0.0170	0.0099	0.0071
29	0.0170	0.0099	0.0071
30	0.0170	0.0099	0.0071
31	0.0171	0.0099	0.0071
32	0.0171	0.0100	0.0072
33	0.0172	0.0100	0.0072
34	0.0172	0.0100	0.0072
35	0.0172	0.0100	0.0072
36	0.0173	0.0100	0.0072
37	0.0173	0.0101	0.0072
38	0.0174	0.0101	0.0073
39	0.0174	0.0101	0.0073
40	0.0174	0.0101	0.0073
41	0.0175	0.0102	0.0073
42	0.0175	0.0102	0.0073
43	0.0176	0.0102	0.0074
44	0.0176	0.0102	0.0074
45	0.0177	0.0103	0.0074
46	0.0177	0.0103	0.0074
47	0.0178	0.0103	0.0074
48	0.0178	0.0103	0.0074
49	0.0178	0.0104	0.0075
50	0.0179	0.0104	0.0075
51	0.0179	0.0104	0.0075
52	0.0180	0.0105	0.0075
53	0.0180	0.0105	0.0075
54	0.0181	0.0105	0.0076
55	0.0181	0.0105	0.0076
56	0.0182	0.0106	0.0076
57	0.0182	0.0106	0.0076
58	0.0183	0.0106	0.0076
59	0.0183	0.0107	0.0077
60	0.0184	0.0107	0.0077
61	0.0184	0.0107	0.0077
62	0.0185	0.0107	0.0077
63	0.0185	0.0108	0.0077
64	0.0186	0.0108	0.0078
65	0.0186	0.0108	0.0078
66	0.0187	0.0109	0.0078
67	0.0187	0.0109	0.0078
68	0.0188	0.0109	0.0079
69	0.0189	0.0110	0.0079
70	0.0189	0.0110	0.0079
71	0.0190	0.0110	0.0079
72	0.0190	0.0111	0.0079
73	0.0191	0.0111	0.0080
74	0.0191	0.0111	0.0080
75	0.0192	0.0112	0.0080
76	0.0192	0.0112	0.0080

77	0.0193	0.0112	0.0081
78	0.0194	0.0113	0.0081
79	0.0194	0.0113	0.0081
80	0.0195	0.0113	0.0081
81	0.0196	0.0114	0.0082
82	0.0196	0.0114	0.0082
83	0.0197	0.0115	0.0082
84	0.0197	0.0115	0.0083
85	0.0198	0.0115	0.0083
86	0.0199	0.0116	0.0083
87	0.0200	0.0116	0.0084
88	0.0200	0.0116	0.0084
89	0.0201	0.0117	0.0084
90	0.0202	0.0117	0.0084
91	0.0203	0.0118	0.0085
92	0.0203	0.0118	0.0085
93	0.0204	0.0119	0.0085
94	0.0205	0.0119	0.0086
95	0.0206	0.0120	0.0086
96	0.0206	0.0120	0.0086
97	0.0207	0.0120	0.0087
98	0.0208	0.0121	0.0087
99	0.0209	0.0121	0.0087
100	0.0209	0.0122	0.0088
101	0.0210	0.0122	0.0088
102	0.0211	0.0123	0.0088
103	0.0212	0.0123	0.0089
104	0.0213	0.0124	0.0089
105	0.0214	0.0124	0.0089
106	0.0214	0.0125	0.0090
107	0.0216	0.0125	0.0090
108	0.0216	0.0126	0.0090
109	0.0218	0.0127	0.0091
110	0.0218	0.0127	0.0091
111	0.0219	0.0128	0.0092
112	0.0220	0.0128	0.0092
113	0.0221	0.0129	0.0093
114	0.0222	0.0129	0.0093
115	0.0224	0.0130	0.0093
116	0.0224	0.0130	0.0094
117	0.0226	0.0131	0.0094
118	0.0226	0.0132	0.0095
119	0.0228	0.0133	0.0095
120	0.0229	0.0133	0.0096
121	0.0230	0.0134	0.0096
122	0.0231	0.0134	0.0097
123	0.0233	0.0135	0.0097
124	0.0233	0.0136	0.0098
125	0.0235	0.0137	0.0098
126	0.0236	0.0137	0.0099
127	0.0238	0.0138	0.0099
128	0.0239	0.0139	0.0100
129	0.0240	0.0140	0.0101
130	0.0241	0.0140	0.0101
131	0.0243	0.0141	0.0102
132	0.0244	0.0142	0.0102
133	0.0246	0.0143	0.0103
134	0.0247	0.0144	0.0103
135	0.0249	0.0145	0.0104
136	0.0250	0.0146	0.0105
137	0.0253	0.0147	0.0106
138	0.0254	0.0148	0.0106
139	0.0256	0.0149	0.0107
140	0.0257	0.0150	0.0108
141	0.0259	0.0151	0.0109
142	0.0261	0.0152	0.0109
143	0.0263	0.0153	0.0110
144	0.0265	0.0154	0.0111
145	0.0261	0.0152	0.0109
146	0.0262	0.0153	0.0110
147	0.0265	0.0154	0.0111

148	0.0267	0.0155	0.0112
149	0.0270	0.0157	0.0113
150	0.0271	0.0158	0.0113
151	0.0275	0.0160	0.0115
152	0.0276	0.0161	0.0116
153	0.0280	0.0163	0.0117
154	0.0282	0.0164	0.0118
155	0.0285	0.0166	0.0119
156	0.0287	0.0167	0.0120
157	0.0291	0.0170	0.0122
158	0.0293	0.0171	0.0123
159	0.0298	0.0173	0.0125
160	0.0300	0.0175	0.0126
161	0.0305	0.0177	0.0128
162	0.0307	0.0179	0.0129
163	0.0313	0.0182	0.0131
164	0.0315	0.0183	0.0132
165	0.0321	0.0187	0.0134
166	0.0324	0.0189	0.0135
167	0.0330	0.0192	0.0138
168	0.0334	0.0194	0.0140
169	0.0341	0.0198	0.0143
170	0.0345	0.0200	0.0144
171	0.0352	0.0205	0.0147
172	0.0357	0.0208	0.0149
173	0.0366	0.0213	0.0153
174	0.0371	0.0216	0.0155
175	0.0381	0.0222	0.0159
176	0.0387	0.0225	0.0162
177	0.0399	0.0232	0.0167
178	0.0406	0.0236	0.0170
179	0.0420	0.0244	0.0176
180	0.0428	0.0249	0.0179
181	0.0446	0.0260	0.0187
182	0.0457	0.0266	0.0191
183	0.0480	0.0279	0.0201
184	0.0493	0.0287	0.0206
185	0.0258	0.0150	0.0108
186	0.0275	0.0160	0.0115
187	0.0318	0.0185	0.0133
188	0.0348	0.0202	0.0145
189	0.0432	0.0251	0.0181
190	0.0498	0.0290	0.0208
191	0.0755	0.0439	0.0316
192	0.1096	0.0489	0.0608
193	0.4744	0.0489	0.4255
194	0.0595	0.0346	0.0249
195	0.0384	0.0224	0.0161
196	0.0294	0.0171	0.0123
197	0.0508	0.0295	0.0212
198	0.0468	0.0272	0.0196
199	0.0437	0.0254	0.0183
200	0.0413	0.0240	0.0173
201	0.0393	0.0228	0.0164
202	0.0376	0.0219	0.0157
203	0.0361	0.0210	0.0151
204	0.0348	0.0203	0.0146
205	0.0337	0.0196	0.0141
206	0.0327	0.0190	0.0137
207	0.0318	0.0185	0.0133
208	0.0310	0.0180	0.0130
209	0.0302	0.0176	0.0126
210	0.0296	0.0172	0.0124
211	0.0289	0.0168	0.0121
212	0.0283	0.0165	0.0119
213	0.0278	0.0162	0.0116
214	0.0273	0.0159	0.0114
215	0.0268	0.0156	0.0112
216	0.0264	0.0153	0.0110
217	0.0266	0.0155	0.0111
218	0.0262	0.0152	0.0110

219	0.0258	0.0150	0.0108
220	0.0255	0.0148	0.0107
221	0.0251	0.0146	0.0105
222	0.0248	0.0144	0.0104
223	0.0245	0.0143	0.0103
224	0.0242	0.0141	0.0101
225	0.0239	0.0139	0.0100
226	0.0237	0.0138	0.0099
227	0.0234	0.0136	0.0098
228	0.0232	0.0135	0.0097
229	0.0229	0.0133	0.0096
230	0.0227	0.0132	0.0095
231	0.0225	0.0131	0.0094
232	0.0223	0.0130	0.0093
233	0.0221	0.0128	0.0092
234	0.0219	0.0127	0.0091
235	0.0217	0.0126	0.0091
236	0.0215	0.0125	0.0090
237	0.0213	0.0124	0.0089
238	0.0211	0.0123	0.0088
239	0.0210	0.0122	0.0088
240	0.0208	0.0121	0.0087
241	0.0207	0.0120	0.0086
242	0.0205	0.0119	0.0086
243	0.0204	0.0118	0.0085
244	0.0202	0.0118	0.0084
245	0.0201	0.0117	0.0084
246	0.0199	0.0116	0.0083
247	0.0198	0.0115	0.0083
248	0.0197	0.0114	0.0082
249	0.0195	0.0114	0.0082
250	0.0194	0.0113	0.0081
251	0.0193	0.0112	0.0081
252	0.0192	0.0111	0.0080
253	0.0190	0.0111	0.0080
254	0.0189	0.0110	0.0079
255	0.0188	0.0109	0.0079
256	0.0187	0.0109	0.0078
257	0.0186	0.0108	0.0078
258	0.0185	0.0108	0.0077
259	0.0184	0.0107	0.0077
260	0.0183	0.0106	0.0076
261	0.0182	0.0106	0.0076
262	0.0181	0.0105	0.0076
263	0.0180	0.0105	0.0075
264	0.0179	0.0104	0.0075
265	0.0178	0.0104	0.0074
266	0.0177	0.0103	0.0074
267	0.0176	0.0103	0.0074
268	0.0175	0.0102	0.0073
269	0.0175	0.0102	0.0073
270	0.0174	0.0101	0.0073
271	0.0173	0.0101	0.0072
272	0.0172	0.0100	0.0072
273	0.0171	0.0100	0.0072
274	0.0171	0.0099	0.0071
275	0.0170	0.0099	0.0071
276	0.0169	0.0098	0.0071
277	0.0168	0.0098	0.0070
278	0.0168	0.0098	0.0070
279	0.0167	0.0097	0.0070
280	0.0166	0.0097	0.0070
281	0.0166	0.0096	0.0069
282	0.0165	0.0096	0.0069
283	0.0164	0.0096	0.0069
284	0.0164	0.0095	0.0068
285	0.0163	0.0095	0.0068
286	0.0162	0.0094	0.0068
287	0.0162	0.0094	0.0068
288	0.0161	0.0094	0.0067

```
      ----------------------------------------------------------------------
      Total soil rain loss =      4.00(In)
      Total effective rainfall =      3.29(In)
      Peak flow rate in flood hydrograph =     15.45(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0003      0.04  Q          |         |         |         |
  0+10       0.0020      0.25  Q          |         |         |         |
  0+15       0.0048      0.41  Q          |         |         |         |
  0+20       0.0080      0.47  Q          |         |         |         |
  0+25       0.0114      0.50  VQ         |         |         |         |
  0+30       0.0150      0.52  VQ         |         |         |         |
  0+35       0.0186      0.53  VQ         |         |         |         |
  0+40       0.0223      0.53  VQ         |         |         |         |
  0+45       0.0260      0.53  VQ         |         |         |         |
  0+50       0.0297      0.54  VQ         |         |         |         |
  0+55       0.0334      0.54  VQ         |         |         |         |
  1+ 0       0.0371      0.54  VQ         |         |         |         |
  1+ 5       0.0408      0.54  VQ         |         |         |         |
  1+10       0.0446      0.54  VQ         |         |         |         |
  1+15       0.0483      0.54  |Q         |         |         |         |
  1+20       0.0521      0.54  |Q         |         |         |         |
  1+25       0.0558      0.55  |Q         |         |         |         |
  1+30       0.0596      0.55  |Q         |         |         |         |
  1+35       0.0634      0.55  |Q         |         |         |         |
  1+40       0.0672      0.55  |Q         |         |         |         |
  1+45       0.0710      0.55  |Q         |         |         |         |
  1+50       0.0748      0.55  |Q         |         |         |         |
  1+55       0.0786      0.55  |Q         |         |         |         |
  2+ 0       0.0824      0.55  |Q         |         |         |         |
  2+ 5       0.0862      0.56  |Q         |         |         |         |
  2+10       0.0900      0.56  |QV        |         |         |         |
  2+15       0.0939      0.56  |QV        |         |         |         |
  2+20       0.0977      0.56  |QV        |         |         |         |
  2+25       0.1016      0.56  |QV        |         |         |         |
  2+30       0.1054      0.56  |QV        |         |         |         |
  2+35       0.1093      0.56  |QV        |         |         |         |
  2+40       0.1132      0.56  |QV        |         |         |         |
  2+45       0.1171      0.57  |QV        |         |         |         |
  2+50       0.1210      0.57  |QV        |         |         |         |
  2+55       0.1249      0.57  |QV        |         |         |         |
  3+ 0       0.1288      0.57  |QV        |         |         |         |
  3+ 5       0.1328      0.57  |QV        |         |         |         |
  3+10       0.1367      0.57  |Q V       |         |         |         |
  3+15       0.1406      0.57  |Q V       |         |         |         |
  3+20       0.1446      0.57  |Q V       |         |         |         |
  3+25       0.1486      0.58  |Q V       |         |         |         |
  3+30       0.1525      0.58  |Q V       |         |         |         |
  3+35       0.1565      0.58  |Q V       |         |         |         |
  3+40       0.1605      0.58  |Q V       |         |         |         |
  3+45       0.1645      0.58  |Q V       |         |         |         |
  3+50       0.1685      0.58  |Q V       |         |         |         |
  3+55       0.1725      0.58  |Q V       |         |         |         |
  4+ 0       0.1766      0.59  |Q V       |         |         |         |
  4+ 5       0.1806      0.59  |Q  V      |         |         |         |
  4+10       0.1847      0.59  |Q  V      |         |         |         |
  4+15       0.1887      0.59  |Q  V      |         |         |         |
  4+20       0.1928      0.59  |Q  V      |         |         |         |
  4+25       0.1969      0.59  |Q  V      |         |         |         |
  4+30       0.2010      0.59  |Q  V      |         |         |         |
  4+35       0.2051      0.60  |Q  V      |         |         |         |
  4+40       0.2092      0.60  |Q  V      |         |         |         |
  4+45       0.2133      0.60  |Q  V      |         |         |         |
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 4+50       0.2175      0.60  |Q  V     |          |          |          |
 4+55       0.2216      0.60  |Q  V     |          |          |          |
 5+ 0       0.2258      0.60  |Q   V    |          |          |          |
 5+ 5       0.2300      0.61  |Q   V    |          |          |          |
 5+10       0.2341      0.61  |Q   V    |          |          |          |
 5+15       0.2383      0.61  |Q   V    |          |          |          |
 5+20       0.2426      0.61  |Q   V    |          |          |          |
 5+25       0.2468      0.61  |Q   V    |          |          |          |
 5+30       0.2510      0.61  |Q   V    |          |          |          |
 5+35       0.2552      0.62  |Q   V    |          |          |          |
 5+40       0.2595      0.62  |Q   V    |          |          |          |
 5+45       0.2638      0.62  |Q   V    |          |          |          |
 5+50       0.2680      0.62  |Q   V    |          |          |          |
 5+55       0.2723      0.62  |Q    V   |          |          |          |
 6+ 0       0.2766      0.63  |Q    V   |          |          |          |
 6+ 5       0.2810      0.63  |Q    V   |          |          |          |
 6+10       0.2853      0.63  |Q    V   |          |          |          |
 6+15       0.2896      0.63  |Q    V   |          |          |          |
 6+20       0.2940      0.63  |Q    V   |          |          |          |
 6+25       0.2984      0.63  |Q    V   |          |          |          |
 6+30       0.3028      0.64  |Q    V   |          |          |          |
 6+35       0.3072      0.64  |Q    V   |          |          |          |
 6+40       0.3116      0.64  |Q    V   |          |          |          |
 6+45       0.3160      0.64  |Q     V  |          |          |          |
 6+50       0.3204      0.64  |Q     V  |          |          |          |
 6+55       0.3249      0.65  |Q     V  |          |          |          |
 7+ 0       0.3294      0.65  |Q     V  |          |          |          |
 7+ 5       0.3339      0.65  |Q     V  |          |          |          |
 7+10       0.3384      0.65  |Q     V  |          |          |          |
 7+15       0.3429      0.66  |Q     V  |          |          |          |
 7+20       0.3474      0.66  |Q     V  |          |          |          |
 7+25       0.3519      0.66  |Q     V  |          |          |          |
 7+30       0.3565      0.66  |Q     V  |          |          |          |
 7+35       0.3611      0.66  |Q      V |          |          |          |
 7+40       0.3657      0.67  |Q      V |          |          |          |
 7+45       0.3703      0.67  |Q      V |          |          |          |
 7+50       0.3749      0.67  |Q      V |          |          |          |
 7+55       0.3796      0.67  |Q      V |          |          |          |
 8+ 0       0.3842      0.68  |Q      V |          |          |          |
 8+ 5       0.3889      0.68  |Q      V |          |          |          |
 8+10       0.3936      0.68  |Q      V |          |          |          |
 8+15       0.3983      0.68  |Q      V |          |          |          |
 8+20       0.4031      0.69  |Q      V |          |          |          |
 8+25       0.4078      0.69  |Q       V|          |          |          |
 8+30       0.4126      0.69  |Q       V|          |          |          |
 8+35       0.4174      0.70  |Q       V|          |          |          |
 8+40       0.4222      0.70  |Q       V|          |          |          |
 8+45       0.4270      0.70  |Q       V|          |          |          |
 8+50       0.4319      0.70  |Q       V|          |          |          |
 8+55       0.4367      0.71  |Q       V|          |          |          |
 9+ 0       0.4416      0.71  |Q       V|          |          |          |
 9+ 5       0.4465      0.71  |Q       V|          |          |          |
 9+10       0.4515      0.72  |Q        V          |          |          |
 9+15       0.4564      0.72  |Q        V          |          |          |
 9+20       0.4614      0.72  |Q        V          |          |          |
 9+25       0.4664      0.73  |Q        V          |          |          |
 9+30       0.4714      0.73  |Q        V          |          |          |
 9+35       0.4764      0.73  |Q        V          |          |          |
 9+40       0.4815      0.74  |Q        V          |          |          |
 9+45       0.4866      0.74  |Q        V          |          |          |
 9+50       0.4917      0.74  |Q        V          |          |          |
 9+55       0.4969      0.75  |Q        |V         |          |          |
10+ 0       0.5020      0.75  |Q        |V         |          |          |
10+ 5       0.5072      0.75  |Q        |V         |          |          |
10+10       0.5124      0.76  |Q        |V         |          |          |
10+15       0.5177      0.76  |Q        |V         |          |          |
10+20       0.5229      0.77  |Q        |V         |          |          |
10+25       0.5282      0.77  |Q        |V         |          |          |
10+30       0.5336      0.77  |Q        |V         |          |          |
10+35       0.5389      0.78  |Q        | V        |          |          |
10+40       0.5443      0.78  |Q        | V        |          |          |
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10+45       0.5497      0.79  |Q        | V       |         |         |
10+50       0.5551      0.79  |Q        | V       |         |         |
10+55       0.5606      0.79  |Q        | V       |         |         |
11+ 0       0.5661      0.80  |Q        | V       |         |         |
11+ 5       0.5717      0.80  |Q        | V       |         |         |
11+10       0.5772      0.81  |Q        | V       |         |         |
11+15       0.5828      0.81  |Q        |  V      |         |         |
11+20       0.5885      0.82  |Q        |  V      |         |         |
11+25       0.5942      0.82  |Q        |  V      |         |         |
11+30       0.5999      0.83  |Q        |  V      |         |         |
11+35       0.6056      0.83  |Q        |  V      |         |         |
11+40       0.6114      0.84  |Q        |  V      |         |         |
11+45       0.6172      0.85  |Q        |  V      |         |         |
11+50       0.6231      0.85  |Q        |  V      |         |         |
11+55       0.6290      0.86  |Q        |   V     |         |         |
12+ 0       0.6350      0.86  |Q        |   V     |         |         |
12+ 5       0.6409      0.87  |Q        |   V     |         |         |
12+10       0.6469      0.87  |Q        |   V     |         |         |
12+15       0.6529      0.87  |Q        |   V     |         |         |
12+20       0.6589      0.87  |Q        |   V     |         |         |
12+25       0.6649      0.88  |Q        |   V     |         |         |
12+30       0.6710      0.88  |Q        |   V     |         |         |
12+35       0.6772      0.89  |Q        |    V    |         |         |
12+40       0.6834      0.90  |Q        |    V    |         |         |
12+45       0.6896      0.91  |Q        |    V    |         |         |
12+50       0.6959      0.92  |Q        |    V    |         |         |
12+55       0.7023      0.92  |Q        |    V    |         |         |
13+ 0       0.7087      0.93  |Q        |    V    |         |         |
13+ 5       0.7152      0.94  |Q        |    V    |         |         |
13+10       0.7218      0.95  |Q        |     V   |         |         |
13+15       0.7284      0.96  |Q        |     V   |         |         |
13+20       0.7351      0.97  |Q        |     V   |         |         |
13+25       0.7419      0.98  |Q        |     V   |         |         |
13+30       0.7487      1.00  |Q        |     V   |         |         |
13+35       0.7557      1.01  | Q       |     V   |         |         |
13+40       0.7627      1.02  | Q       |      V  |         |         |
13+45       0.7698      1.03  | Q       |      V  |         |         |
13+50       0.7770      1.05  | Q       |      V  |         |         |
13+55       0.7843      1.06  | Q       |      V  |         |         |
14+ 0       0.7918      1.08  | Q       |      V  |         |         |
14+ 5       0.7993      1.09  | Q       |      V  |         |         |
14+10       0.8069      1.11  | Q       |       V |         |         |
14+15       0.8147      1.13  | Q       |       V |         |         |
14+20       0.8226      1.15  | Q       |       V |         |         |
14+25       0.8306      1.16  | Q       |       V |         |         |
14+30       0.8387      1.19  | Q       |       V |         |         |
14+35       0.8471      1.21  | Q       |       V |         |         |
14+40       0.8556      1.23  | Q       |        V|         |         |
14+45       0.8642      1.26  | Q       |        V|         |         |
14+50       0.8731      1.29  | Q       |        V|         |         |
14+55       0.8822      1.32  | Q       |        V|         |         |
15+ 0       0.8915      1.35  | Q       |        V|         |         |
15+ 5       0.9011      1.39  | Q       |         V         |         |
15+10       0.9109      1.43  | Q       |         V         |         |
15+15       0.9211      1.48  | Q       |         V         |         |
15+20       0.9316      1.53  |  Q      |         V         |         |
15+25       0.9421      1.53  |  Q      |         |V        |         |
15+30       0.9507      1.25  | Q       |         |V        |         |
15+35       0.9580      1.06  | Q       |         |V        |         |
15+40       0.9653      1.06  | Q       |         |V        |         |
15+45       0.9730      1.12  | Q       |         |V        |         |
15+50       0.9818      1.27  | Q       |         |V        |         |
15+55       0.9922      1.51  |  Q      |         | V       |         |
16+ 0       1.0068      2.12  |   Q     |         | V       |         |
16+ 5       1.0435      5.33  |         Q         |  V      |         |
16+10       1.1499     15.45  |         |         |    V    Q         |
16+15       1.2301     11.65  |         |         |  Q   V  |         |
16+20       1.2667      5.32  |         Q         |       V |         |
16+25       1.2902      3.40  |     Q   |         |       V |         |
16+30       1.3076      2.54  |    Q    |         |        V|         |
16+35       1.3210      1.95  |  Q      |         |        V|         |
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16+40      1.3327      1.69  |  Q      |         |        V|         |
16+45      1.3436      1.58  |  Q      |         |        V|         |
16+50      1.3537      1.47  | Q       |         |         V         |
16+55      1.3629      1.33  | Q       |         |         V         |
17+ 0      1.3715      1.24  | Q       |         |         V         |
17+ 5      1.3797      1.20  | Q       |         |         V         |
17+10      1.3877      1.16  | Q       |         |         V         |
17+15      1.3954      1.12  | Q       |         |         |V        |
17+20      1.4028      1.08  | Q       |         |         |V        |
17+25      1.4101      1.05  | Q       |         |         |V        |
17+30      1.4172      1.03  | Q       |         |         |V        |
17+35      1.4241      1.00  | Q       |         |         |V        |
17+40      1.4308      0.98  |Q        |         |         |V        |
17+45      1.4374      0.96  |Q        |         |         | V       |
17+50      1.4439      0.94  |Q        |         |         | V       |
17+55      1.4502      0.92  |Q        |         |         | V       |
18+ 0      1.4564      0.90  |Q        |         |         | V       |
18+ 5      1.4625      0.89  |Q        |         |         | V       |
18+10      1.4686      0.88  |Q        |         |         | V       |
18+15      1.4746      0.87  |Q        |         |         | V       |
18+20      1.4806      0.86  |Q        |         |         |  V      |
18+25      1.4865      0.85  |Q        |         |         |  V      |
18+30      1.4923      0.84  |Q        |         |         |  V      |
18+35      1.4980      0.83  |Q        |         |         |  V      |
18+40      1.5036      0.82  |Q        |         |         |  V      |
18+45      1.5092      0.81  |Q        |         |         |  V      |
18+50      1.5147      0.80  |Q        |         |         |  V      |
18+55      1.5202      0.79  |Q        |         |         |  V      |
19+ 0      1.5256      0.78  |Q        |         |         |   V     |
19+ 5      1.5309      0.77  |Q        |         |         |   V     |
19+10      1.5362      0.77  |Q        |         |         |   V     |
19+15      1.5414      0.76  |Q        |         |         |   V     |
19+20      1.5466      0.75  |Q        |         |         |   V     |
19+25      1.5517      0.74  |Q        |         |         |   V     |
19+30      1.5568      0.74  |Q        |         |         |   V     |
19+35      1.5618      0.73  |Q        |         |         |   V     |
19+40      1.5668      0.72  |Q        |         |         |   V     |
19+45      1.5717      0.72  |Q        |         |         |    V    |
19+50      1.5766      0.71  |Q        |         |         |    V    |
19+55      1.5815      0.71  |Q        |         |         |    V    |
20+ 0      1.5863      0.70  |Q        |         |         |    V    |
20+ 5      1.5911      0.69  |Q        |         |         |    V    |
20+10      1.5958      0.69  |Q        |         |         |    V    |
20+15      1.6005      0.68  |Q        |         |         |    V    |
20+20      1.6052      0.68  |Q        |         |         |    V    |
20+25      1.6098      0.67  |Q        |         |         |    V    |
20+30      1.6144      0.67  |Q        |         |         |     V   |
20+35      1.6190      0.66  |Q        |         |         |     V   |
20+40      1.6236      0.66  |Q        |         |         |     V   |
20+45      1.6281      0.65  |Q        |         |         |     V   |
20+50      1.6325      0.65  |Q        |         |         |     V   |
20+55      1.6370      0.65  |Q        |         |         |     V   |
21+ 0      1.6414      0.64  |Q        |         |         |     V   |
21+ 5      1.6458      0.64  |Q        |         |         |     V   |
21+10      1.6502      0.63  |Q        |         |         |     V   |
21+15      1.6545      0.63  |Q        |         |         |     V   |
21+20      1.6588      0.63  |Q        |         |         |      V  |
21+25      1.6631      0.62  |Q        |         |         |      V  |
21+30      1.6673      0.62  |Q        |         |         |      V  |
21+35      1.6716      0.61  |Q        |         |         |      V  |
21+40      1.6758      0.61  |Q        |         |         |      V  |
21+45      1.6800      0.61  |Q        |         |         |      V  |
21+50      1.6841      0.60  |Q        |         |         |      V  |
21+55      1.6883      0.60  |Q        |         |         |      V  |
22+ 0      1.6924      0.60  |Q        |         |         |      V  |
22+ 5      1.6965      0.60  |Q        |         |         |      V  |
22+10      1.7006      0.59  |Q        |         |         |      V  |
22+15      1.7046      0.59  |Q        |         |         |       V |
22+20      1.7087      0.59  |Q        |         |         |       V |
22+25      1.7127      0.58  |Q        |         |         |       V |
22+30      1.7167      0.58  |Q        |         |         |       V |
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   22+35       1.7207      0.58  |Q        |         |         |       V |
   22+40       1.7246      0.57  |Q        |         |         |       V |
   22+45       1.7286      0.57  |Q        |         |         |       V |
   22+50       1.7325      0.57  |Q        |         |         |       V |
   22+55       1.7364      0.57  |Q        |         |         |       V |
   23+ 0       1.7403      0.56  |Q        |         |         |       V |
   23+ 5       1.7442      0.56  |Q        |         |         |       V |
   23+10       1.7480      0.56  |Q        |         |         |        V|
   23+15       1.7518      0.56  |Q        |         |         |        V|
   23+20       1.7557      0.55  |Q        |         |         |        V|
   23+25       1.7595      0.55  |Q        |         |         |        V|
   23+30       1.7632      0.55  |Q        |         |         |        V|
   23+35       1.7670      0.55  |Q        |         |         |        V|
   23+40       1.7708      0.55  |Q        |         |         |        V|
   23+45       1.7745      0.54  |Q        |         |         |        V|
   23+50       1.7782      0.54  |Q        |         |         |        V|
   23+55       1.7819      0.54  |Q        |         |         |        V|
   24+ 0       1.7856      0.54  |Q        |         |         |        V|
   24+ 5       1.7891      0.50  Q         |         |         |        V|
   24+10       1.7910      0.28  Q         |         |         |        V|
   24+15       1.7919      0.13  Q         |         |         |        V|
   24+20       1.7923      0.07  Q         |         |         |        V|
   24+25       1.7926      0.03  Q         |         |         |        V|
   24+30       1.7927      0.02  Q         |         |         |        V|
   24+35       1.7927      0.01  Q         |         |         |        V|
   24+40       1.7928      0.00  Q         |         |         |        V|
   24+45       1.7928      0.00  Q         |         |         |        V|
   24+50       1.7928      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

Area 'C' – 25 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
25 YEAR 24 HOUR STORM
DECEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 25

        Antecedent Moisture Condition = 2

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.54            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.54            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.54           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.54            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.54            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.54           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 2)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 32.0      32.0          6.54      1.000     0.978    0.600    0.587

Area-averaged adjusted loss rate Fm (In/Hr) =  0.587

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
3.92	0.600	32.0	32.0	21.25	0.101
2.62	0.400	98.0	98.0	0.20	0.974

Area-averaged catchment yield fraction, Y = 0.450
Area-averaged low loss fraction, Yb = 0.550
User entry of time of concentration = 0.152 (hours)
++
Watershed area = 6.54(Ac.)
Catchment Lag time = 0.121 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 68.6210
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.587(In/Hr)
Average low loss rate fraction (Yb) = 0.550 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.569(In)
Computed peak 30-minute rainfall = 0.974(In)
Specified peak 1-hour rainfall = 1.199(In)
Computed peak 3-hour rainfall = 2.358(In)
Specified peak 6-hour rainfall = 3.614(In)
Specified peak 24-hour rainfall = 9.165(In)

Rainfall depth area reduction factors:
Using a total area of 6.54(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.569(In)
30-minute factor = 1.000 Adjusted rainfall = 0.974(In)
1-hour factor = 1.000 Adjusted rainfall = 1.199(In)
3-hour factor = 1.000 Adjusted rainfall = 2.358(In)
6-hour factor = 1.000 Adjusted rainfall = 3.614(In)
24-hour factor = 1.000 Adjusted rainfall = 9.165(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 79.09 (CFS))	
1	6.926	5.478
2	46.826	31.558
3	76.548	23.508
4	87.652	8.782
5	93.849	4.901
6	97.160	2.619
7	98.439	1.012
8	99.077	0.504
9	99.557	0.380
10	99.888	0.262
11	100.000	0.088

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5687	0.5687
2	0.7002	0.1315
3	0.7908	0.0906
4	0.8621	0.0713
5	0.9217	0.0597
6	0.9736	0.0518
7	1.0196	0.0461
8	1.0613	0.0417
9	1.0995	0.0382
10	1.1348	0.0353
11	1.1677	0.0329
12	1.1986	0.0309
13	1.2592	0.0606
14	1.3180	0.0588

15	1.3752	0.0572
16	1.4310	0.0558
17	1.4855	0.0545
18	1.5387	0.0532
19	1.5908	0.0521
20	1.6419	0.0511
21	1.6920	0.0501
22	1.7412	0.0492
23	1.7895	0.0483
24	1.8371	0.0475
25	1.8838	0.0468
26	1.9299	0.0461
27	1.9753	0.0454
28	2.0201	0.0448
29	2.0642	0.0441
30	2.1078	0.0436
31	2.1508	0.0430
32	2.1933	0.0425
33	2.2352	0.0420
34	2.2767	0.0415
35	2.3178	0.0410
36	2.3583	0.0406
37	2.3985	0.0401
38	2.4382	0.0397
39	2.4775	0.0393
40	2.5164	0.0389
41	2.5550	0.0386
42	2.5932	0.0382
43	2.6310	0.0379
44	2.6685	0.0375
45	2.7057	0.0372
46	2.7426	0.0369
47	2.7792	0.0366
48	2.8154	0.0363
49	2.8514	0.0360
50	2.8871	0.0357
51	2.9225	0.0354
52	2.9577	0.0352
53	2.9926	0.0349
54	3.0272	0.0346
55	3.0616	0.0344
56	3.0958	0.0342
57	3.1297	0.0339
58	3.1634	0.0337
59	3.1969	0.0335
60	3.2302	0.0333
61	3.2632	0.0330
62	3.2961	0.0328
63	3.3287	0.0326
64	3.3611	0.0324
65	3.3934	0.0322
66	3.4254	0.0321
67	3.4573	0.0319
68	3.4890	0.0317
69	3.5205	0.0315
70	3.5519	0.0313
71	3.5830	0.0312
72	3.6140	0.0310
73	3.6476	0.0336
74	3.6811	0.0335
75	3.7144	0.0333
76	3.7476	0.0332
77	3.7806	0.0330
78	3.8135	0.0329
79	3.8462	0.0328
80	3.8789	0.0326
81	3.9113	0.0325
82	3.9437	0.0323
83	3.9759	0.0322
84	4.0080	0.0321
85	4.0400	0.0320

86	4.0718	0.0318
87	4.1035	0.0317
88	4.1351	0.0316
89	4.1666	0.0315
90	4.1980	0.0314
91	4.2292	0.0313
92	4.2604	0.0311
93	4.2914	0.0310
94	4.3223	0.0309
95	4.3531	0.0308
96	4.3839	0.0307
97	4.4145	0.0306
98	4.4450	0.0305
99	4.4753	0.0304
100	4.5056	0.0303
101	4.5358	0.0302
102	4.5659	0.0301
103	4.5959	0.0300
104	4.6258	0.0299
105	4.6557	0.0298
106	4.6854	0.0297
107	4.7150	0.0296
108	4.7445	0.0295
109	4.7740	0.0294
110	4.8033	0.0294
111	4.8326	0.0293
112	4.8618	0.0292
113	4.8909	0.0291
114	4.9199	0.0290
115	4.9488	0.0289
116	4.9777	0.0288
117	5.0064	0.0288
118	5.0351	0.0287
119	5.0637	0.0286
120	5.0922	0.0285
121	5.1207	0.0284
122	5.1491	0.0284
123	5.1773	0.0283
124	5.2056	0.0282
125	5.2337	0.0281
126	5.2618	0.0281
127	5.2898	0.0280
128	5.3177	0.0279
129	5.3455	0.0279
130	5.3733	0.0278
131	5.4010	0.0277
132	5.4287	0.0276
133	5.4563	0.0276
134	5.4838	0.0275
135	5.5112	0.0274
136	5.5386	0.0274
137	5.5659	0.0273
138	5.5931	0.0272
139	5.6203	0.0272
140	5.6474	0.0271
141	5.6744	0.0270
142	5.7014	0.0270
143	5.7283	0.0269
144	5.7552	0.0269
145	5.7820	0.0268
146	5.8087	0.0267
147	5.8354	0.0267
148	5.8620	0.0266
149	5.8886	0.0266
150	5.9151	0.0265
151	5.9415	0.0264
152	5.9679	0.0264
153	5.9942	0.0263
154	6.0205	0.0263
155	6.0467	0.0262
156	6.0729	0.0262

157	6.0990	0.0261
158	6.1250	0.0260
159	6.1510	0.0260
160	6.1770	0.0259
161	6.2029	0.0259
162	6.2287	0.0258
163	6.2545	0.0258
164	6.2802	0.0257
165	6.3059	0.0257
166	6.3315	0.0256
167	6.3571	0.0256
168	6.3826	0.0255
169	6.4081	0.0255
170	6.4335	0.0254
171	6.4589	0.0254
172	6.4842	0.0253
173	6.5095	0.0253
174	6.5348	0.0252
175	6.5599	0.0252
176	6.5851	0.0251
177	6.6102	0.0251
178	6.6352	0.0250
179	6.6602	0.0250
180	6.6852	0.0250
181	6.7101	0.0249
182	6.7349	0.0249
183	6.7598	0.0248
184	6.7845	0.0248
185	6.8093	0.0247
186	6.8340	0.0247
187	6.8586	0.0246
188	6.8832	0.0246
189	6.9077	0.0246
190	6.9323	0.0245
191	6.9567	0.0245
192	6.9812	0.0244
193	7.0055	0.0244
194	7.0299	0.0243
195	7.0542	0.0243
196	7.0785	0.0243
197	7.1027	0.0242
198	7.1269	0.0242
199	7.1510	0.0241
200	7.1751	0.0241
201	7.1992	0.0241
202	7.2232	0.0240
203	7.2472	0.0240
204	7.2711	0.0239
205	7.2950	0.0239
206	7.3189	0.0239
207	7.3427	0.0238
208	7.3665	0.0238
209	7.3903	0.0238
210	7.4140	0.0237
211	7.4377	0.0237
212	7.4613	0.0236
213	7.4849	0.0236
214	7.5085	0.0236
215	7.5320	0.0235
216	7.5555	0.0235
217	7.5790	0.0235
218	7.6024	0.0234
219	7.6258	0.0234
220	7.6492	0.0234
221	7.6725	0.0233
222	7.6958	0.0233
223	7.7190	0.0233
224	7.7422	0.0232
225	7.7654	0.0232
226	7.7886	0.0232
227	7.8117	0.0231

228	7.8348	0.0231
229	7.8578	0.0231
230	7.8808	0.0230
231	7.9038	0.0230
232	7.9268	0.0230
233	7.9497	0.0229
234	7.9726	0.0229
235	7.9954	0.0229
236	8.0183	0.0228
237	8.0411	0.0228
238	8.0638	0.0228
239	8.0865	0.0227
240	8.1092	0.0227
241	8.1319	0.0227
242	8.1545	0.0226
243	8.1771	0.0226
244	8.1997	0.0226
245	8.2223	0.0225
246	8.2448	0.0225
247	8.2673	0.0225
248	8.2897	0.0225
249	8.3121	0.0224
250	8.3345	0.0224
251	8.3569	0.0224
252	8.3792	0.0223
253	8.4015	0.0223
254	8.4238	0.0223
255	8.4461	0.0222
256	8.4683	0.0222
257	8.4905	0.0222
258	8.5126	0.0222
259	8.5348	0.0221
260	8.5569	0.0221
261	8.5789	0.0221
262	8.6010	0.0221
263	8.6230	0.0220
264	8.6450	0.0220
265	8.6670	0.0220
266	8.6889	0.0219
267	8.7108	0.0219
268	8.7327	0.0219
269	8.7546	0.0219
270	8.7764	0.0218
271	8.7982	0.0218
272	8.8200	0.0218
273	8.8418	0.0218
274	8.8635	0.0217
275	8.8852	0.0217
276	8.9069	0.0217
277	8.9285	0.0216
278	8.9501	0.0216
279	8.9717	0.0216
280	8.9933	0.0216
281	9.0148	0.0215
282	9.0364	0.0215
283	9.0579	0.0215
284	9.0793	0.0215
285	9.1008	0.0214
286	9.1222	0.0214
287	9.1436	0.0214
288	9.1650	0.0214

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0214	0.0118	0.0096
2	0.0214	0.0118	0.0096
3	0.0214	0.0118	0.0097
4	0.0215	0.0118	0.0097
5	0.0215	0.0118	0.0097

6	0.0215	0.0119	0.0097
7	0.0216	0.0119	0.0097
8	0.0216	0.0119	0.0097
9	0.0217	0.0119	0.0098
10	0.0217	0.0119	0.0098
11	0.0218	0.0120	0.0098
12	0.0218	0.0120	0.0098
13	0.0218	0.0120	0.0098
14	0.0219	0.0120	0.0098
15	0.0219	0.0121	0.0099
16	0.0219	0.0121	0.0099
17	0.0220	0.0121	0.0099
18	0.0220	0.0121	0.0099
19	0.0221	0.0121	0.0099
20	0.0221	0.0122	0.0099
21	0.0222	0.0122	0.0100
22	0.0222	0.0122	0.0100
23	0.0222	0.0122	0.0100
24	0.0223	0.0123	0.0100
25	0.0223	0.0123	0.0100
26	0.0224	0.0123	0.0101
27	0.0224	0.0123	0.0101
28	0.0225	0.0124	0.0101
29	0.0225	0.0124	0.0101
30	0.0225	0.0124	0.0101
31	0.0226	0.0124	0.0102
32	0.0226	0.0125	0.0102
33	0.0227	0.0125	0.0102
34	0.0227	0.0125	0.0102
35	0.0228	0.0125	0.0103
36	0.0228	0.0126	0.0103
37	0.0229	0.0126	0.0103
38	0.0229	0.0126	0.0103
39	0.0230	0.0126	0.0103
40	0.0230	0.0127	0.0104
41	0.0231	0.0127	0.0104
42	0.0231	0.0127	0.0104
43	0.0232	0.0128	0.0104
44	0.0232	0.0128	0.0104
45	0.0233	0.0128	0.0105
46	0.0233	0.0128	0.0105
47	0.0234	0.0129	0.0105
48	0.0234	0.0129	0.0105
49	0.0235	0.0129	0.0106
50	0.0235	0.0129	0.0106
51	0.0236	0.0130	0.0106
52	0.0236	0.0130	0.0106
53	0.0237	0.0130	0.0107
54	0.0238	0.0131	0.0107
55	0.0238	0.0131	0.0107
56	0.0239	0.0131	0.0107
57	0.0239	0.0132	0.0108
58	0.0240	0.0132	0.0108
59	0.0241	0.0132	0.0108
60	0.0241	0.0133	0.0108
61	0.0242	0.0133	0.0109
62	0.0242	0.0133	0.0109
63	0.0243	0.0134	0.0109
64	0.0243	0.0134	0.0110
65	0.0244	0.0134	0.0110
66	0.0245	0.0135	0.0110
67	0.0246	0.0135	0.0110
68	0.0246	0.0135	0.0111
69	0.0247	0.0136	0.0111
70	0.0247	0.0136	0.0111
71	0.0248	0.0137	0.0112
72	0.0249	0.0137	0.0112
73	0.0250	0.0137	0.0112
74	0.0250	0.0138	0.0112
75	0.0251	0.0138	0.0113
76	0.0251	0.0138	0.0113

77	0.0252	0.0139	0.0114
78	0.0253	0.0139	0.0114
79	0.0254	0.0140	0.0114
80	0.0254	0.0140	0.0114
81	0.0255	0.0140	0.0115
82	0.0256	0.0141	0.0115
83	0.0257	0.0141	0.0116
84	0.0257	0.0142	0.0116
85	0.0258	0.0142	0.0116
86	0.0259	0.0142	0.0116
87	0.0260	0.0143	0.0117
88	0.0260	0.0143	0.0117
89	0.0262	0.0144	0.0118
90	0.0262	0.0144	0.0118
91	0.0263	0.0145	0.0118
92	0.0264	0.0145	0.0119
93	0.0265	0.0146	0.0119
94	0.0266	0.0146	0.0119
95	0.0267	0.0147	0.0120
96	0.0267	0.0147	0.0120
97	0.0269	0.0148	0.0121
98	0.0269	0.0148	0.0121
99	0.0270	0.0149	0.0122
100	0.0271	0.0149	0.0122
101	0.0272	0.0150	0.0123
102	0.0273	0.0150	0.0123
103	0.0274	0.0151	0.0123
104	0.0275	0.0151	0.0124
105	0.0276	0.0152	0.0124
106	0.0277	0.0152	0.0125
107	0.0279	0.0153	0.0125
108	0.0279	0.0154	0.0126
109	0.0281	0.0154	0.0126
110	0.0281	0.0155	0.0127
111	0.0283	0.0156	0.0127
112	0.0284	0.0156	0.0128
113	0.0285	0.0157	0.0128
114	0.0286	0.0157	0.0129
115	0.0288	0.0158	0.0129
116	0.0288	0.0159	0.0130
117	0.0290	0.0160	0.0131
118	0.0291	0.0160	0.0131
119	0.0293	0.0161	0.0132
120	0.0294	0.0161	0.0132
121	0.0295	0.0162	0.0133
122	0.0296	0.0163	0.0133
123	0.0298	0.0164	0.0134
124	0.0299	0.0164	0.0135
125	0.0301	0.0166	0.0135
126	0.0302	0.0166	0.0136
127	0.0304	0.0167	0.0137
128	0.0305	0.0168	0.0137
129	0.0307	0.0169	0.0138
130	0.0308	0.0169	0.0139
131	0.0310	0.0171	0.0140
132	0.0311	0.0171	0.0140
133	0.0314	0.0173	0.0141
134	0.0315	0.0173	0.0142
135	0.0317	0.0174	0.0143
136	0.0318	0.0175	0.0143
137	0.0321	0.0177	0.0144
138	0.0322	0.0177	0.0145
139	0.0325	0.0179	0.0146
140	0.0326	0.0179	0.0147
141	0.0329	0.0181	0.0148
142	0.0330	0.0182	0.0149
143	0.0333	0.0183	0.0150
144	0.0335	0.0184	0.0151
145	0.0310	0.0170	0.0139
146	0.0312	0.0171	0.0140
147	0.0315	0.0173	0.0142

148	0.0317	0.0174	0.0143
149	0.0321	0.0176	0.0144
150	0.0322	0.0177	0.0145
151	0.0326	0.0180	0.0147
152	0.0328	0.0181	0.0148
153	0.0333	0.0183	0.0150
154	0.0335	0.0184	0.0151
155	0.0339	0.0187	0.0153
156	0.0342	0.0188	0.0154
157	0.0346	0.0191	0.0156
158	0.0349	0.0192	0.0157
159	0.0354	0.0195	0.0159
160	0.0357	0.0196	0.0161
161	0.0363	0.0199	0.0163
162	0.0366	0.0201	0.0165
163	0.0372	0.0205	0.0167
164	0.0375	0.0206	0.0169
165	0.0382	0.0210	0.0172
166	0.0386	0.0212	0.0173
167	0.0393	0.0216	0.0177
168	0.0397	0.0218	0.0179
169	0.0406	0.0223	0.0183
170	0.0410	0.0226	0.0185
171	0.0420	0.0231	0.0189
172	0.0425	0.0234	0.0191
173	0.0436	0.0240	0.0196
174	0.0441	0.0243	0.0199
175	0.0454	0.0250	0.0204
176	0.0461	0.0253	0.0207
177	0.0475	0.0261	0.0214
178	0.0483	0.0266	0.0218
179	0.0501	0.0276	0.0225
180	0.0511	0.0281	0.0230
181	0.0532	0.0293	0.0240
182	0.0545	0.0300	0.0245
183	0.0572	0.0315	0.0257
184	0.0588	0.0324	0.0265
185	0.0309	0.0170	0.0139
186	0.0329	0.0181	0.0148
187	0.0382	0.0210	0.0172
188	0.0417	0.0229	0.0188
189	0.0518	0.0285	0.0233
190	0.0597	0.0328	0.0269
191	0.0906	0.0489	0.0417
192	0.1315	0.0489	0.0826
193	0.5687	0.0489	0.5199
194	0.0713	0.0392	0.0321
195	0.0461	0.0253	0.0207
196	0.0353	0.0194	0.0159
197	0.0606	0.0333	0.0273
198	0.0558	0.0307	0.0251
199	0.0521	0.0287	0.0234
200	0.0492	0.0271	0.0221
201	0.0468	0.0257	0.0211
202	0.0448	0.0246	0.0201
203	0.0430	0.0237	0.0194
204	0.0415	0.0228	0.0187
205	0.0401	0.0221	0.0181
206	0.0389	0.0214	0.0175
207	0.0379	0.0208	0.0170
208	0.0369	0.0203	0.0166
209	0.0360	0.0198	0.0162
210	0.0352	0.0193	0.0158
211	0.0344	0.0189	0.0155
212	0.0337	0.0185	0.0152
213	0.0330	0.0182	0.0149
214	0.0324	0.0178	0.0146
215	0.0319	0.0175	0.0143
216	0.0313	0.0172	0.0141
217	0.0336	0.0185	0.0151
218	0.0332	0.0182	0.0149

219	0.0328	0.0180	0.0147
220	0.0323	0.0178	0.0146
221	0.0320	0.0176	0.0144
222	0.0316	0.0174	0.0142
223	0.0313	0.0172	0.0141
224	0.0309	0.0170	0.0139
225	0.0306	0.0168	0.0138
226	0.0303	0.0167	0.0136
227	0.0300	0.0165	0.0135
228	0.0297	0.0163	0.0134
229	0.0294	0.0162	0.0132
230	0.0292	0.0161	0.0131
231	0.0289	0.0159	0.0130
232	0.0287	0.0158	0.0129
233	0.0284	0.0156	0.0128
234	0.0282	0.0155	0.0127
235	0.0280	0.0154	0.0126
236	0.0278	0.0153	0.0125
237	0.0276	0.0152	0.0124
238	0.0274	0.0151	0.0123
239	0.0272	0.0149	0.0122
240	0.0270	0.0148	0.0121
241	0.0268	0.0147	0.0121
242	0.0266	0.0146	0.0120
243	0.0264	0.0145	0.0119
244	0.0263	0.0145	0.0118
245	0.0261	0.0144	0.0117
246	0.0259	0.0143	0.0117
247	0.0258	0.0142	0.0116
248	0.0256	0.0141	0.0115
249	0.0255	0.0140	0.0115
250	0.0253	0.0139	0.0114
251	0.0252	0.0139	0.0113
252	0.0250	0.0138	0.0113
253	0.0249	0.0137	0.0112
254	0.0248	0.0136	0.0111
255	0.0246	0.0136	0.0111
256	0.0245	0.0135	0.0110
257	0.0244	0.0134	0.0110
258	0.0243	0.0133	0.0109
259	0.0241	0.0133	0.0109
260	0.0240	0.0132	0.0108
261	0.0239	0.0131	0.0108
262	0.0238	0.0131	0.0107
263	0.0237	0.0130	0.0107
264	0.0236	0.0130	0.0106
265	0.0235	0.0129	0.0106
266	0.0234	0.0128	0.0105
267	0.0233	0.0128	0.0105
268	0.0232	0.0127	0.0104
269	0.0231	0.0127	0.0104
270	0.0230	0.0126	0.0103
271	0.0229	0.0126	0.0103
272	0.0228	0.0125	0.0102
273	0.0227	0.0125	0.0102
274	0.0226	0.0124	0.0102
275	0.0225	0.0124	0.0101
276	0.0224	0.0123	0.0101
277	0.0223	0.0123	0.0100
278	0.0222	0.0122	0.0100
279	0.0221	0.0122	0.0100
280	0.0221	0.0121	0.0099
281	0.0220	0.0121	0.0099
282	0.0219	0.0120	0.0098
283	0.0218	0.0120	0.0098
284	0.0217	0.0120	0.0098
285	0.0216	0.0119	0.0097
286	0.0216	0.0119	0.0097
287	0.0215	0.0118	0.0097
288	0.0214	0.0118	0.0096

```
      ------------------------------------------------------------------
      Total soil rain loss =      4.75(In)
      Total effective rainfall =      4.41(In)
      Peak flow rate in flood hydrograph =     19.12(CFS)
      ------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0004      0.05  Q          |          |          |          |
  0+10       0.0028      0.36  Q          |          |          |          |
  0+15       0.0068      0.58  VQ         |          |          |          |
  0+20       0.0114      0.67  VQ         |          |          |          |
  0+25       0.0164      0.72  VQ         |          |          |          |
  0+30       0.0215      0.74  VQ         |          |          |          |
  0+35       0.0267      0.75  VQ         |          |          |          |
  0+40       0.0319      0.76  VQ         |          |          |          |
  0+45       0.0372      0.77  VQ         |          |          |          |
  0+50       0.0425      0.77  VQ         |          |          |          |
  0+55       0.0478      0.77  VQ         |          |          |          |
  1+ 0       0.0531      0.77  VQ         |          |          |          |
  1+ 5       0.0584      0.77  VQ         |          |          |          |
  1+10       0.0638      0.78  |Q         |          |          |          |
  1+15       0.0691      0.78  |Q         |          |          |          |
  1+20       0.0745      0.78  |Q         |          |          |          |
  1+25       0.0799      0.78  |Q         |          |          |          |
  1+30       0.0852      0.78  |Q         |          |          |          |
  1+35       0.0906      0.78  |Q         |          |          |          |
  1+40       0.0960      0.78  |Q         |          |          |          |
  1+45       0.1014      0.79  |Q         |          |          |          |
  1+50       0.1069      0.79  |Q         |          |          |          |
  1+55       0.1123      0.79  |Q         |          |          |          |
  2+ 0       0.1177      0.79  |Q         |          |          |          |
  2+ 5       0.1232      0.79  |QV        |          |          |          |
  2+10       0.1286      0.79  |QV        |          |          |          |
  2+15       0.1341      0.79  |QV        |          |          |          |
  2+20       0.1396      0.80  |QV        |          |          |          |
  2+25       0.1451      0.80  |QV        |          |          |          |
  2+30       0.1506      0.80  |QV        |          |          |          |
  2+35       0.1561      0.80  |QV        |          |          |          |
  2+40       0.1617      0.80  |QV        |          |          |          |
  2+45       0.1672      0.80  |QV        |          |          |          |
  2+50       0.1727      0.81  |QV        |          |          |          |
  2+55       0.1783      0.81  |QV        |          |          |          |
  3+ 0       0.1839      0.81  |Q V       |          |          |          |
  3+ 5       0.1895      0.81  |Q V       |          |          |          |
  3+10       0.1951      0.81  |Q V       |          |          |          |
  3+15       0.2007      0.81  |Q V       |          |          |          |
  3+20       0.2063      0.82  |Q V       |          |          |          |
  3+25       0.2119      0.82  |Q V       |          |          |          |
  3+30       0.2176      0.82  |Q V       |          |          |          |
  3+35       0.2232      0.82  |Q V       |          |          |          |
  3+40       0.2289      0.82  |Q V       |          |          |          |
  3+45       0.2346      0.82  |Q V       |          |          |          |
  3+50       0.2403      0.83  |Q V       |          |          |          |
  3+55       0.2460      0.83  |Q  V      |          |          |          |
  4+ 0       0.2517      0.83  |Q  V      |          |          |          |
  4+ 5       0.2574      0.83  |Q  V      |          |          |          |
  4+10       0.2632      0.83  |Q  V      |          |          |          |
  4+15       0.2689      0.84  |Q  V      |          |          |          |
  4+20       0.2747      0.84  |Q  V      |          |          |          |
  4+25       0.2805      0.84  |Q  V      |          |          |          |
  4+30       0.2863      0.84  |Q  V      |          |          |          |
  4+35       0.2921      0.84  |Q  V      |          |          |          |
  4+40       0.2979      0.85  |Q  V      |          |          |          |
  4+45       0.3038      0.85  |Q   V     |          |          |          |
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 4+50      0.3096      0.85  |Q   V    |          |          |          |
 4+55      0.3155      0.85  |Q   V    |          |          |          |
 5+ 0      0.3214      0.85  |Q   V    |          |          |          |
 5+ 5      0.3273      0.86  |Q   V    |          |          |          |
 5+10      0.3332      0.86  |Q   V    |          |          |          |
 5+15      0.3391      0.86  |Q   V    |          |          |          |
 5+20      0.3450      0.86  |Q   V    |          |          |          |
 5+25      0.3510      0.86  |Q   V    |          |          |          |
 5+30      0.3570      0.87  |Q   V    |          |          |          |
 5+35      0.3629      0.87  |Q    V   |          |          |          |
 5+40      0.3689      0.87  |Q    V   |          |          |          |
 5+45      0.3750      0.87  |Q    V   |          |          |          |
 5+50      0.3810      0.88  |Q    V   |          |          |          |
 5+55      0.3870      0.88  |Q    V   |          |          |          |
 6+ 0      0.3931      0.88  |Q    V   |          |          |          |
 6+ 5      0.3992      0.88  |Q    V   |          |          |          |
 6+10      0.4053      0.89  |Q    V   |          |          |          |
 6+15      0.4114      0.89  |Q    V   |          |          |          |
 6+20      0.4175      0.89  |Q    V   |          |          |          |
 6+25      0.4237      0.89  |Q     V  |          |          |          |
 6+30      0.4298      0.90  |Q     V  |          |          |          |
 6+35      0.4360      0.90  |Q     V  |          |          |          |
 6+40      0.4422      0.90  |Q     V  |          |          |          |
 6+45      0.4484      0.90  |Q     V  |          |          |          |
 6+50      0.4547      0.91  |Q     V  |          |          |          |
 6+55      0.4609      0.91  |Q     V  |          |          |          |
 7+ 0      0.4672      0.91  |Q     V  |          |          |          |
 7+ 5      0.4735      0.91  |Q     V  |          |          |          |
 7+10      0.4798      0.92  |Q     V  |          |          |          |
 7+15      0.4861      0.92  |Q      V |          |          |          |
 7+20      0.4925      0.92  |Q      V |          |          |          |
 7+25      0.4989      0.92  |Q      V |          |          |          |
 7+30      0.5053      0.93  |Q      V |          |          |          |
 7+35      0.5117      0.93  |Q      V |          |          |          |
 7+40      0.5181      0.93  |Q      V |          |          |          |
 7+45      0.5245      0.94  |Q      V |          |          |          |
 7+50      0.5310      0.94  |Q      V |          |          |          |
 7+55      0.5375      0.94  |Q      V |          |          |          |
 8+ 0      0.5440      0.95  |Q       V|          |          |          |
 8+ 5      0.5506      0.95  |Q       V|          |          |          |
 8+10      0.5571      0.95  |Q       V|          |          |          |
 8+15      0.5637      0.96  |Q       V|          |          |          |
 8+20      0.5703      0.96  |Q       V|          |          |          |
 8+25      0.5769      0.96  |Q       V|          |          |          |
 8+30      0.5836      0.97  |Q       V|          |          |          |
 8+35      0.5903      0.97  |Q       V|          |          |          |
 8+40      0.5970      0.97  |Q       V|          |          |          |
 8+45      0.6037      0.98  |Q        V          |          |          |
 8+50      0.6104      0.98  |Q        V          |          |          |
 8+55      0.6172      0.98  |Q        V          |          |          |
 9+ 0      0.6240      0.99  |Q        V          |          |          |
 9+ 5      0.6308      0.99  |Q        V          |          |          |
 9+10      0.6377      0.99  |Q        V          |          |          |
 9+15      0.6445      1.00  |Q        V          |          |          |
 9+20      0.6514      1.00  | Q       V          |          |          |
 9+25      0.6584      1.01  | Q       V          |          |          |
 9+30      0.6653      1.01  | Q       |V         |          |          |
 9+35      0.6723      1.01  | Q       |V         |          |          |
 9+40      0.6793      1.02  | Q       |V         |          |          |
 9+45      0.6864      1.02  | Q       |V         |          |          |
 9+50      0.6935      1.03  | Q       |V         |          |          |
 9+55      0.7006      1.03  | Q       |V         |          |          |
10+ 0      0.7077      1.04  | Q       |V         |          |          |
10+ 5      0.7149      1.04  | Q       |V         |          |          |
10+10      0.7221      1.05  | Q       | V        |          |          |
10+15      0.7293      1.05  | Q       | V        |          |          |
10+20      0.7366      1.06  | Q       | V        |          |          |
10+25      0.7439      1.06  | Q       | V        |          |          |
10+30      0.7512      1.07  | Q       | V        |          |          |
10+35      0.7586      1.07  | Q       | V        |          |          |
10+40      0.7660      1.08  | Q       | V        |          |          |
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10+45       0.7735      1.08  | Q       | V       |         |         |
10+50       0.7810      1.09  | Q       | V       |         |         |
10+55       0.7885      1.09  | Q       |  V      |         |         |
11+ 0       0.7960      1.10  | Q       |  V      |         |         |
11+ 5       0.8036      1.10  | Q       |  V      |         |         |
11+10       0.8113      1.11  | Q       |  V      |         |         |
11+15       0.8190      1.12  | Q       |  V      |         |         |
11+20       0.8267      1.12  | Q       |  V      |         |         |
11+25       0.8345      1.13  | Q       |  V      |         |         |
11+30       0.8423      1.13  | Q       |   V     |         |         |
11+35       0.8501      1.14  | Q       |   V     |         |         |
11+40       0.8581      1.15  | Q       |   V     |         |         |
11+45       0.8660      1.16  | Q       |   V     |         |         |
11+50       0.8740      1.16  | Q       |   V     |         |         |
11+55       0.8821      1.17  | Q       |   V     |         |         |
12+ 0       0.8902      1.18  | Q       |   V     |         |         |
12+ 5       0.8983      1.18  | Q       |   V     |         |         |
12+10       0.9062      1.15  | Q       |    V    |         |         |
12+15       0.9139      1.13  | Q       |    V    |         |         |
12+20       0.9217      1.12  | Q       |    V    |         |         |
12+25       0.9294      1.13  | Q       |    V    |         |         |
12+30       0.9372      1.13  | Q       |    V    |         |         |
12+35       0.9451      1.14  | Q       |    V    |         |         |
12+40       0.9530      1.15  | Q       |    V    |         |         |
12+45       0.9610      1.16  | Q       |    V    |         |         |
12+50       0.9691      1.17  | Q       |     V   |         |         |
12+55       0.9773      1.18  | Q       |     V   |         |         |
13+ 0       0.9855      1.19  | Q       |     V   |         |         |
13+ 5       0.9938      1.21  | Q       |     V   |         |         |
13+10       1.0022      1.22  | Q       |     V   |         |         |
13+15       1.0107      1.23  | Q       |     V   |         |         |
13+20       1.0192      1.25  | Q       |     V   |         |         |
13+25       1.0279      1.26  | Q       |      V  |         |         |
13+30       1.0367      1.27  | Q       |      V  |         |         |
13+35       1.0456      1.29  | Q       |      V  |         |         |
13+40       1.0546      1.31  | Q       |      V  |         |         |
13+45       1.0637      1.32  | Q       |      V  |         |         |
13+50       1.0729      1.34  | Q       |      V  |         |         |
13+55       1.0823      1.36  | Q       |       V |         |         |
14+ 0       1.0918      1.38  | Q       |       V |         |         |
14+ 5       1.1014      1.40  | Q       |       V |         |         |
14+10       1.1112      1.42  | Q       |       V |         |         |
14+15       1.1211      1.44  | Q       |       V |         |         |
14+20       1.1312      1.47  | Q       |       V |         |         |
14+25       1.1415      1.49  | Q       |       V |         |         |
14+30       1.1519      1.52  |  Q      |        V|         |         |
14+35       1.1626      1.55  |  Q      |        V|         |         |
14+40       1.1735      1.58  |  Q      |        V|         |         |
14+45       1.1846      1.61  |  Q      |        V|         |         |
14+50       1.1960      1.65  |  Q      |        V|         |         |
14+55       1.2076      1.69  |  Q      |         V         |         |
15+ 0       1.2196      1.74  |  Q      |         V         |         |
15+ 5       1.2319      1.78  |  Q      |         V         |         |
15+10       1.2445      1.84  |  Q      |         V         |         |
15+15       1.2575      1.89  |  Q      |         V         |         |
15+20       1.2711      1.96  |  Q      |         |V        |         |
15+25       1.2846      1.96  |  Q      |         |V        |         |
15+30       1.2956      1.60  |  Q      |         |V        |         |
15+35       1.3050      1.36  | Q       |         |V        |         |
15+40       1.3144      1.37  | Q       |         |V        |         |
15+45       1.3243      1.45  | Q       |         | V       |         |
15+50       1.3356      1.64  |  Q      |         | V       |         |
15+55       1.3491      1.96  |  Q      |         | V       |         |
16+ 0       1.3683      2.78  |    Q    |         | V       |         |
16+ 5       1.4156      6.87  |         |  Q      |  V      |         |
16+10       1.5473     19.12  |         |         |    V    |       Q |
16+15       1.6464     14.39  |         |         |     VQ  |         |
16+20       1.6920      6.63  |         |  Q      |       V |         |
16+25       1.7213      4.25  |       Q |         |       V |         |
16+30       1.7433      3.19  |     Q   |         |        V|         |
16+35       1.7604      2.48  |   Q     |         |        V|         |
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16+40       1.7753      2.16  |   Q     |         |        V|         |
16+45       1.7892      2.02  |   Q     |         |        V|         |
16+50       1.8021      1.88  |  Q      |         |        V|         |
16+55       1.8139      1.71  |  Q      |         |         V         |
17+ 0       1.8249      1.59  |  Q      |         |         V         |
17+ 5       1.8355      1.53  |  Q      |         |         V         |
17+10       1.8457      1.48  | Q       |         |         V         |
17+15       1.8555      1.43  | Q       |         |         V         |
17+20       1.8651      1.39  | Q       |         |         |V        |
17+25       1.8744      1.35  | Q       |         |         |V        |
17+30       1.8834      1.31  | Q       |         |         |V        |
17+35       1.8923      1.28  | Q       |         |         |V        |
17+40       1.9009      1.25  | Q       |         |         |V        |
17+45       1.9093      1.23  | Q       |         |         |V        |
17+50       1.9176      1.20  | Q       |         |         |V        |
17+55       1.9257      1.18  | Q       |         |         | V       |
18+ 0       1.9336      1.15  | Q       |         |         | V       |
18+ 5       1.9415      1.14  | Q       |         |         | V       |
18+10       1.9495      1.16  | Q       |         |         | V       |
18+15       1.9576      1.17  | Q       |         |         | V       |
18+20       1.9656      1.17  | Q       |         |         | V       |
18+25       1.9736      1.16  | Q       |         |         | V       |
18+30       1.9815      1.15  | Q       |         |         | V       |
18+35       1.9894      1.14  | Q       |         |         |  V      |
18+40       1.9971      1.12  | Q       |         |         |  V      |
18+45       2.0048      1.11  | Q       |         |         |  V      |
18+50       2.0123      1.10  | Q       |         |         |  V      |
18+55       2.0198      1.09  | Q       |         |         |  V      |
19+ 0       2.0273      1.08  | Q       |         |         |  V      |
19+ 5       2.0346      1.07  | Q       |         |         |  V      |
19+10       2.0419      1.06  | Q       |         |         |  V      |
19+15       2.0491      1.05  | Q       |         |         |   V     |
19+20       2.0563      1.04  | Q       |         |         |   V     |
19+25       2.0633      1.03  | Q       |         |         |   V     |
19+30       2.0704      1.02  | Q       |         |         |   V     |
19+35       2.0773      1.01  | Q       |         |         |   V     |
19+40       2.0843      1.00  | Q       |         |         |   V     |
19+45       2.0911      1.00  |Q        |         |         |   V     |
19+50       2.0979      0.99  |Q        |         |         |   V     |
19+55       2.1047      0.98  |Q        |         |         |    V    |
20+ 0       2.1114      0.97  |Q        |         |         |    V    |
20+ 5       2.1181      0.97  |Q        |         |         |    V    |
20+10       2.1247      0.96  |Q        |         |         |    V    |
20+15       2.1312      0.95  |Q        |         |         |    V    |
20+20       2.1378      0.95  |Q        |         |         |    V    |
20+25       2.1442      0.94  |Q        |         |         |    V    |
20+30       2.1507      0.93  |Q        |         |         |    V    |
20+35       2.1571      0.93  |Q        |         |         |    V    |
20+40       2.1634      0.92  |Q        |         |         |     V   |
20+45       2.1697      0.92  |Q        |         |         |     V   |
20+50       2.1760      0.91  |Q        |         |         |     V   |
20+55       2.1823      0.91  |Q        |         |         |     V   |
21+ 0       2.1885      0.90  |Q        |         |         |     V   |
21+ 5       2.1946      0.90  |Q        |         |         |     V   |
21+10       2.2008      0.89  |Q        |         |         |     V   |
21+15       2.2069      0.89  |Q        |         |         |     V   |
21+20       2.2130      0.88  |Q        |         |         |     V   |
21+25       2.2190      0.88  |Q        |         |         |     V   |
21+30       2.2250      0.87  |Q        |         |         |      V  |
21+35       2.2310      0.87  |Q        |         |         |      V  |
21+40       2.2369      0.86  |Q        |         |         |      V  |
21+45       2.2428      0.86  |Q        |         |         |      V  |
21+50       2.2487      0.85  |Q        |         |         |      V  |
21+55       2.2546      0.85  |Q        |         |         |      V  |
22+ 0       2.2604      0.85  |Q        |         |         |      V  |
22+ 5       2.2662      0.84  |Q        |         |         |      V  |
22+10       2.2720      0.84  |Q        |         |         |      V  |
22+15       2.2777      0.83  |Q        |         |         |      V  |
22+20       2.2835      0.83  |Q        |         |         |       V |
22+25       2.2892      0.83  |Q        |         |         |       V |
22+30       2.2948      0.82  |Q        |         |         |       V |
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   22+35       2.3005      0.82  |Q        |          |          |       V |
   22+40       2.3061      0.82  |Q        |          |          |       V |
   22+45       2.3117      0.81  |Q        |          |          |       V |
   22+50       2.3173      0.81  |Q        |          |          |       V |
   22+55       2.3228      0.81  |Q        |          |          |       V |
   23+ 0       2.3284      0.80  |Q        |          |          |       V |
   23+ 5       2.3339      0.80  |Q        |          |          |       V |
   23+10       2.3394      0.80  |Q        |          |          |       V |
   23+15       2.3448      0.79  |Q        |          |          |        V|
   23+20       2.3503      0.79  |Q        |          |          |        V|
   23+25       2.3557      0.79  |Q        |          |          |        V|
   23+30       2.3611      0.78  |Q        |          |          |        V|
   23+35       2.3665      0.78  |Q        |          |          |        V|
   23+40       2.3719      0.78  |Q        |          |          |        V|
   23+45       2.3772      0.78  |Q        |          |          |        V|
   23+50       2.3825      0.77  |Q        |          |          |        V|
   23+55       2.3878      0.77  |Q        |          |          |        V|
   24+ 0       2.3931      0.77  |Q        |          |          |        V|
   24+ 5       2.3980      0.71  |Q        |          |          |        V|
   24+10       2.4008      0.41  Q         |          |          |        V|
   24+15       2.4021      0.18  Q         |          |          |        V|
   24+20       2.4027      0.09  Q         |          |          |        V|
   24+25       2.4030      0.05  Q         |          |          |        V|
   24+30       2.4032      0.02  Q         |          |          |        V|
   24+35       2.4033      0.01  Q         |          |          |        V|
   24+40       2.4033      0.01  Q         |          |          |        V|
   24+45       2.4033      0.00  Q         |          |          |        V|
   24+50       2.4033      0.00  Q         |          |          |         V
-------------------------------------------------------------------------
```

Area ‘C’ – 100 Year 24 Hour - Proposed Condition – Unit Hydrograph

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

               Study date  12/17/24

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San Bernardino County Synthetic Unit Hydrology Method
               Manual date - August 1986


Program License Serial Number 6407

----------------------------------------------------------------------
TTM 20707 - PROPOSED PRELIMINARY UNIT HYDROGRAPH
DRAINAGE AREA 'C'
100 YEAR 24 HOUR STORM
DECEMBER 4, 2024
----------------------------------------------------------------------

        Storm Event Year = 100

        Antecedent Moisture Condition = 3

 English (in-lb) Input Units Used

 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



Area averaged rainfall intensity isohyetal data:
        Sub-Area        Duration        Isohyetal
        (Ac.)            (hours)         (In)
Rainfall data for year 10
             6.54            1           1.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.54            6           2.00
----------------------------------------------------------------------
Rainfall data for year 2
             6.54           24           4.00
----------------------------------------------------------------------
Rainfall data for year 100
             6.54            1           1.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.54            6           4.50
----------------------------------------------------------------------
Rainfall data for year 100
             6.54           24          12.00
----------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********


SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap      Fm
No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)   (In/Hr)
 32.0      52.0          6.54      1.000     0.785    0.600    0.471

Area-averaged adjusted loss rate Fm (In/Hr) =  0.471

********* Area-Averaged low loss rate fraction, Yb **********
```

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
3.92	0.600	32.0	52.0	9.23	0.443
2.62	0.400	98.0	98.0	0.20	0.980

Area-averaged catchment yield fraction, Y = 0.658
Area-averaged low loss fraction, Yb = 0.342
User entry of time of concentration = 0.152 (hours)
++
Watershed area = 6.54(Ac.)
Catchment Lag time = 0.121 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 68.7569
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.471(In/Hr)
Average low loss rate fraction (Yb) = 0.342 (decimal)
FOOTHILL S-Graph Selected
Computed peak 5-minute rainfall = 0.712(In)
Computed peak 30-minute rainfall = 1.218(In)
Specified peak 1-hour rainfall = 1.500(In)
Computed peak 3-hour rainfall = 2.942(In)
Specified peak 6-hour rainfall = 4.500(In)
Specified peak 24-hour rainfall = 12.000(In)

Rainfall depth area reduction factors:
Using a total area of 6.54(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.712(In)
30-minute factor = 1.000 Adjusted rainfall = 1.218(In)
1-hour factor = 1.000 Adjusted rainfall = 1.500(In)
3-hour factor = 1.000 Adjusted rainfall = 2.942(In)
6-hour factor = 1.000 Adjusted rainfall = 4.500(In)
24-hour factor = 1.000 Adjusted rainfall = 12.000(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 79.09 (CFS))	
1	6.949	5.496
2	46.966	31.651
3	76.622	23.455
4	87.707	8.768
5	93.888	4.889
6	97.183	2.606
7	98.449	1.001
8	99.084	0.502
9	99.565	0.381
10	99.892	0.259
11	100.000	0.085

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.7115	0.7115
2	0.8760	0.1645
3	0.9893	0.1133
4	1.0785	0.0892
5	1.1532	0.0747
6	1.2180	0.0648
7	1.2757	0.0576
8	1.3278	0.0521
9	1.3756	0.0478
10	1.4197	0.0442
11	1.4609	0.0412
12	1.4995	0.0386
13	1.5750	0.0755
14	1.6482	0.0732

15	1.7195	0.0713
16	1.7889	0.0694
17	1.8567	0.0678
18	1.9230	0.0663
19	1.9878	0.0648
20	2.0513	0.0635
21	2.1137	0.0623
22	2.1748	0.0612
23	2.2350	0.0601
24	2.2941	0.0591
25	2.3522	0.0582
26	2.4095	0.0573
27	2.4659	0.0564
28	2.5216	0.0556
29	2.5764	0.0549
30	2.6306	0.0541
31	2.6840	0.0534
32	2.7368	0.0528
33	2.7890	0.0521
34	2.8405	0.0515
35	2.8914	0.0510
36	2.9418	0.0504
37	2.9917	0.0498
38	3.0410	0.0493
39	3.0898	0.0488
40	3.1382	0.0483
41	3.1861	0.0479
42	3.2335	0.0474
43	3.2805	0.0470
44	3.3270	0.0466
45	3.3732	0.0462
46	3.4190	0.0458
47	3.4644	0.0454
48	3.5094	0.0450
49	3.5540	0.0447
50	3.5983	0.0443
51	3.6423	0.0440
52	3.6859	0.0436
53	3.7292	0.0433
54	3.7722	0.0430
55	3.8149	0.0427
56	3.8573	0.0424
57	3.8994	0.0421
58	3.9412	0.0418
59	3.9827	0.0415
60	4.0239	0.0413
61	4.0649	0.0410
62	4.1057	0.0407
63	4.1461	0.0405
64	4.1864	0.0402
65	4.2264	0.0400
66	4.2661	0.0398
67	4.3056	0.0395
68	4.3449	0.0393
69	4.3840	0.0391
70	4.4228	0.0389
71	4.4615	0.0386
72	4.4999	0.0384
73	4.5440	0.0441
74	4.5880	0.0440
75	4.6318	0.0438
76	4.6754	0.0436
77	4.7188	0.0434
78	4.7621	0.0433
79	4.8052	0.0431
80	4.8482	0.0430
81	4.8910	0.0428
82	4.9336	0.0426
83	4.9761	0.0425
84	5.0185	0.0423
85	5.0607	0.0422

86	5.1027	0.0421
87	5.1446	0.0419
88	5.1864	0.0418
89	5.2280	0.0416
90	5.2695	0.0415
91	5.3109	0.0414
92	5.3521	0.0412
93	5.3932	0.0411
94	5.4342	0.0410
95	5.4750	0.0408
96	5.5157	0.0407
97	5.5563	0.0406
98	5.5968	0.0405
99	5.6371	0.0403
100	5.6773	0.0402
101	5.7174	0.0401
102	5.7574	0.0400
103	5.7973	0.0399
104	5.8371	0.0398
105	5.8767	0.0397
106	5.9163	0.0395
107	5.9557	0.0394
108	5.9951	0.0393
109	6.0343	0.0392
110	6.0734	0.0391
111	6.1124	0.0390
112	6.1513	0.0389
113	6.1901	0.0388
114	6.2288	0.0387
115	6.2674	0.0386
116	6.3060	0.0385
117	6.3444	0.0384
118	6.3827	0.0383
119	6.4209	0.0382
120	6.4590	0.0381
121	6.4971	0.0380
122	6.5350	0.0379
123	6.5729	0.0379
124	6.6106	0.0378
125	6.6483	0.0377
126	6.6859	0.0376
127	6.7234	0.0375
128	6.7608	0.0374
129	6.7981	0.0373
130	6.8354	0.0372
131	6.8725	0.0372
132	6.9096	0.0371
133	6.9466	0.0370
134	6.9835	0.0369
135	7.0204	0.0368
136	7.0571	0.0368
137	7.0938	0.0367
138	7.1304	0.0366
139	7.1669	0.0365
140	7.2033	0.0364
141	7.2397	0.0364
142	7.2760	0.0363
143	7.3122	0.0362
144	7.3484	0.0361
145	7.3844	0.0361
146	7.4204	0.0360
147	7.4564	0.0359
148	7.4922	0.0359
149	7.5280	0.0358
150	7.5637	0.0357
151	7.5993	0.0356
152	7.6349	0.0356
153	7.6704	0.0355
154	7.7059	0.0354
155	7.7412	0.0354
156	7.7765	0.0353

157	7.8118	0.0352
158	7.8469	0.0352
159	7.8820	0.0351
160	7.9171	0.0350
161	7.9521	0.0350
162	7.9870	0.0349
163	8.0218	0.0349
164	8.0566	0.0348
165	8.0913	0.0347
166	8.1260	0.0347
167	8.1606	0.0346
168	8.1952	0.0345
169	8.2296	0.0345
170	8.2641	0.0344
171	8.2984	0.0344
172	8.3327	0.0343
173	8.3670	0.0342
174	8.4012	0.0342
175	8.4353	0.0341
176	8.4694	0.0341
177	8.5034	0.0340
178	8.5374	0.0340
179	8.5713	0.0339
180	8.6051	0.0339
181	8.6389	0.0338
182	8.6727	0.0337
183	8.7064	0.0337
184	8.7400	0.0336
185	8.7736	0.0336
186	8.8071	0.0335
187	8.8406	0.0335
188	8.8740	0.0334
189	8.9074	0.0334
190	8.9407	0.0333
191	8.9740	0.0333
192	9.0072	0.0332
193	9.0403	0.0332
194	9.0735	0.0331
195	9.1065	0.0331
196	9.1395	0.0330
197	9.1725	0.0330
198	9.2054	0.0329
199	9.2383	0.0329
200	9.2711	0.0328
201	9.3039	0.0328
202	9.3366	0.0327
203	9.3693	0.0327
204	9.4019	0.0326
205	9.4345	0.0326
206	9.4670	0.0325
207	9.4995	0.0325
208	9.5320	0.0324
209	9.5644	0.0324
210	9.5967	0.0324
211	9.6291	0.0323
212	9.6613	0.0323
213	9.6935	0.0322
214	9.7257	0.0322
215	9.7579	0.0321
216	9.7899	0.0321
217	9.8220	0.0320
218	9.8540	0.0320
219	9.8860	0.0320
220	9.9179	0.0319
221	9.9497	0.0319
222	9.9816	0.0318
223	10.0134	0.0318
224	10.0451	0.0317
225	10.0768	0.0317
226	10.1085	0.0317
227	10.1401	0.0316

228	10.1717	0.0316
229	10.2032	0.0315
230	10.2348	0.0315
231	10.2662	0.0315
232	10.2976	0.0314
233	10.3290	0.0314
234	10.3604	0.0313
235	10.3917	0.0313
236	10.4229	0.0313
237	10.4542	0.0312
238	10.4854	0.0312
239	10.5165	0.0312
240	10.5476	0.0311
241	10.5787	0.0311
242	10.6097	0.0310
243	10.6407	0.0310
244	10.6717	0.0310
245	10.7026	0.0309
246	10.7335	0.0309
247	10.7644	0.0309
248	10.7952	0.0308
249	10.8260	0.0308
250	10.8567	0.0307
251	10.8874	0.0307
252	10.9181	0.0307
253	10.9487	0.0306
254	10.9793	0.0306
255	11.0099	0.0306
256	11.0404	0.0305
257	11.0709	0.0305
258	11.1014	0.0305
259	11.1318	0.0304
260	11.1622	0.0304
261	11.1926	0.0304
262	11.2229	0.0303
263	11.2532	0.0303
264	11.2834	0.0303
265	11.3137	0.0302
266	11.3438	0.0302
267	11.3740	0.0302
268	11.4041	0.0301
269	11.4342	0.0301
270	11.4643	0.0301
271	11.4943	0.0300
272	11.5243	0.0300
273	11.5543	0.0300
274	11.5842	0.0299
275	11.6141	0.0299
276	11.6439	0.0299
277	11.6738	0.0298
278	11.7036	0.0298
279	11.7334	0.0298
280	11.7631	0.0297
281	11.7928	0.0297
282	11.8225	0.0297
283	11.8521	0.0296
284	11.8817	0.0296
285	11.9113	0.0296
286	11.9409	0.0296
287	11.9704	0.0295
288	11.9999	0.0295

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0295	0.0101	0.0194
2	0.0295	0.0101	0.0194
3	0.0296	0.0101	0.0195
4	0.0296	0.0101	0.0195
5	0.0297	0.0102	0.0195

6	0.0297	0.0102	0.0195
7	0.0298	0.0102	0.0196
8	0.0298	0.0102	0.0196
9	0.0299	0.0102	0.0196
10	0.0299	0.0102	0.0197
11	0.0300	0.0103	0.0197
12	0.0300	0.0103	0.0197
13	0.0301	0.0103	0.0198
14	0.0301	0.0103	0.0198
15	0.0302	0.0103	0.0198
16	0.0302	0.0103	0.0199
17	0.0303	0.0104	0.0199
18	0.0303	0.0104	0.0199
19	0.0304	0.0104	0.0200
20	0.0304	0.0104	0.0200
21	0.0305	0.0104	0.0200
22	0.0305	0.0104	0.0201
23	0.0306	0.0105	0.0201
24	0.0306	0.0105	0.0201
25	0.0307	0.0105	0.0202
26	0.0307	0.0105	0.0202
27	0.0308	0.0105	0.0202
28	0.0308	0.0105	0.0203
29	0.0309	0.0106	0.0203
30	0.0309	0.0106	0.0203
31	0.0310	0.0106	0.0204
32	0.0310	0.0106	0.0204
33	0.0311	0.0106	0.0205
34	0.0312	0.0107	0.0205
35	0.0312	0.0107	0.0205
36	0.0313	0.0107	0.0206
37	0.0313	0.0107	0.0206
38	0.0314	0.0107	0.0206
39	0.0315	0.0108	0.0207
40	0.0315	0.0108	0.0207
41	0.0316	0.0108	0.0208
42	0.0316	0.0108	0.0208
43	0.0317	0.0108	0.0209
44	0.0317	0.0109	0.0209
45	0.0318	0.0109	0.0209
46	0.0319	0.0109	0.0210
47	0.0320	0.0109	0.0210
48	0.0320	0.0109	0.0211
49	0.0321	0.0110	0.0211
50	0.0321	0.0110	0.0211
51	0.0322	0.0110	0.0212
52	0.0323	0.0110	0.0212
53	0.0324	0.0111	0.0213
54	0.0324	0.0111	0.0213
55	0.0325	0.0111	0.0214
56	0.0325	0.0111	0.0214
57	0.0326	0.0112	0.0215
58	0.0327	0.0112	0.0215
59	0.0328	0.0112	0.0216
60	0.0328	0.0112	0.0216
61	0.0329	0.0113	0.0217
62	0.0330	0.0113	0.0217
63	0.0331	0.0113	0.0218
64	0.0331	0.0113	0.0218
65	0.0332	0.0114	0.0219
66	0.0333	0.0114	0.0219
67	0.0334	0.0114	0.0220
68	0.0334	0.0114	0.0220
69	0.0335	0.0115	0.0221
70	0.0336	0.0115	0.0221
71	0.0337	0.0115	0.0222
72	0.0337	0.0115	0.0222
73	0.0339	0.0116	0.0223
74	0.0339	0.0116	0.0223
75	0.0340	0.0116	0.0224
76	0.0341	0.0117	0.0224

77	0.0342	0.0117	0.0225
78	0.0342	0.0117	0.0225
79	0.0344	0.0118	0.0226
80	0.0344	0.0118	0.0226
81	0.0345	0.0118	0.0227
82	0.0346	0.0118	0.0228
83	0.0347	0.0119	0.0228
84	0.0348	0.0119	0.0229
85	0.0349	0.0119	0.0230
86	0.0350	0.0120	0.0230
87	0.0351	0.0120	0.0231
88	0.0352	0.0120	0.0231
89	0.0353	0.0121	0.0232
90	0.0354	0.0121	0.0233
91	0.0355	0.0121	0.0234
92	0.0356	0.0122	0.0234
93	0.0357	0.0122	0.0235
94	0.0358	0.0122	0.0235
95	0.0359	0.0123	0.0236
96	0.0360	0.0123	0.0237
97	0.0361	0.0124	0.0238
98	0.0362	0.0124	0.0238
99	0.0364	0.0124	0.0239
100	0.0364	0.0125	0.0240
101	0.0366	0.0125	0.0241
102	0.0367	0.0125	0.0241
103	0.0368	0.0126	0.0242
104	0.0369	0.0126	0.0243
105	0.0371	0.0127	0.0244
106	0.0372	0.0127	0.0244
107	0.0373	0.0128	0.0246
108	0.0374	0.0128	0.0246
109	0.0376	0.0129	0.0247
110	0.0377	0.0129	0.0248
111	0.0379	0.0130	0.0249
112	0.0379	0.0130	0.0250
113	0.0381	0.0130	0.0251
114	0.0382	0.0131	0.0251
115	0.0384	0.0131	0.0253
116	0.0385	0.0132	0.0253
117	0.0387	0.0132	0.0255
118	0.0388	0.0133	0.0255
119	0.0390	0.0133	0.0257
120	0.0391	0.0134	0.0257
121	0.0393	0.0135	0.0259
122	0.0394	0.0135	0.0259
123	0.0397	0.0136	0.0261
124	0.0398	0.0136	0.0262
125	0.0400	0.0137	0.0263
126	0.0401	0.0137	0.0264
127	0.0403	0.0138	0.0265
128	0.0405	0.0138	0.0266
129	0.0407	0.0139	0.0268
130	0.0408	0.0140	0.0269
131	0.0411	0.0141	0.0270
132	0.0412	0.0141	0.0271
133	0.0415	0.0142	0.0273
134	0.0416	0.0142	0.0274
135	0.0419	0.0143	0.0276
136	0.0421	0.0144	0.0277
137	0.0423	0.0145	0.0279
138	0.0425	0.0145	0.0280
139	0.0428	0.0146	0.0282
140	0.0430	0.0147	0.0283
141	0.0433	0.0148	0.0285
142	0.0434	0.0149	0.0286
143	0.0438	0.0150	0.0288
144	0.0440	0.0150	0.0289
145	0.0384	0.0131	0.0253
146	0.0386	0.0132	0.0254
147	0.0391	0.0134	0.0257

148	0.0393	0.0134	0.0258
149	0.0398	0.0136	0.0262
150	0.0400	0.0137	0.0263
151	0.0405	0.0138	0.0266
152	0.0407	0.0139	0.0268
153	0.0413	0.0141	0.0271
154	0.0415	0.0142	0.0273
155	0.0421	0.0144	0.0277
156	0.0424	0.0145	0.0279
157	0.0430	0.0147	0.0283
158	0.0433	0.0148	0.0285
159	0.0440	0.0150	0.0289
160	0.0443	0.0152	0.0291
161	0.0450	0.0154	0.0296
162	0.0454	0.0155	0.0299
163	0.0462	0.0158	0.0304
164	0.0466	0.0159	0.0306
165	0.0474	0.0162	0.0312
166	0.0479	0.0164	0.0315
167	0.0488	0.0167	0.0321
168	0.0493	0.0169	0.0324
169	0.0504	0.0172	0.0332
170	0.0510	0.0174	0.0335
171	0.0521	0.0178	0.0343
172	0.0528	0.0181	0.0347
173	0.0541	0.0185	0.0356
174	0.0549	0.0188	0.0361
175	0.0564	0.0193	0.0371
176	0.0573	0.0196	0.0377
177	0.0591	0.0202	0.0389
178	0.0601	0.0206	0.0395
179	0.0623	0.0213	0.0410
180	0.0635	0.0217	0.0418
181	0.0663	0.0227	0.0436
182	0.0678	0.0232	0.0446
183	0.0713	0.0244	0.0469
184	0.0732	0.0251	0.0482
185	0.0386	0.0132	0.0254
186	0.0412	0.0141	0.0271
187	0.0478	0.0163	0.0314
188	0.0521	0.0178	0.0343
189	0.0648	0.0222	0.0427
190	0.0747	0.0255	0.0491
191	0.1133	0.0388	0.0745
192	0.1645	0.0393	0.1252
193	0.7115	0.0393	0.6723
194	0.0892	0.0305	0.0587
195	0.0576	0.0197	0.0379
196	0.0442	0.0151	0.0291
197	0.0755	0.0258	0.0496
198	0.0694	0.0238	0.0457
199	0.0648	0.0222	0.0427
200	0.0612	0.0209	0.0403
201	0.0582	0.0199	0.0383
202	0.0556	0.0190	0.0366
203	0.0534	0.0183	0.0352
204	0.0515	0.0176	0.0339
205	0.0498	0.0171	0.0328
206	0.0483	0.0165	0.0318
207	0.0470	0.0161	0.0309
208	0.0458	0.0157	0.0301
209	0.0447	0.0153	0.0294
210	0.0436	0.0149	0.0287
211	0.0427	0.0146	0.0281
212	0.0418	0.0143	0.0275
213	0.0410	0.0140	0.0270
214	0.0402	0.0138	0.0265
215	0.0395	0.0135	0.0260
216	0.0389	0.0133	0.0256
217	0.0441	0.0151	0.0290
218	0.0436	0.0149	0.0287

219	0.0431	0.0148	0.0284
220	0.0426	0.0146	0.0281
221	0.0422	0.0144	0.0278
222	0.0418	0.0143	0.0275
223	0.0414	0.0141	0.0272
224	0.0410	0.0140	0.0270
225	0.0406	0.0139	0.0267
226	0.0402	0.0138	0.0265
227	0.0399	0.0136	0.0262
228	0.0395	0.0135	0.0260
229	0.0392	0.0134	0.0258
230	0.0389	0.0133	0.0256
231	0.0386	0.0132	0.0254
232	0.0383	0.0131	0.0252
233	0.0380	0.0130	0.0250
234	0.0378	0.0129	0.0248
235	0.0375	0.0128	0.0247
236	0.0372	0.0127	0.0245
237	0.0370	0.0127	0.0243
238	0.0368	0.0126	0.0242
239	0.0365	0.0125	0.0240
240	0.0363	0.0124	0.0239
241	0.0361	0.0123	0.0237
242	0.0359	0.0123	0.0236
243	0.0356	0.0122	0.0234
244	0.0354	0.0121	0.0233
245	0.0352	0.0121	0.0232
246	0.0350	0.0120	0.0231
247	0.0349	0.0119	0.0229
248	0.0347	0.0119	0.0228
249	0.0345	0.0118	0.0227
250	0.0343	0.0117	0.0226
251	0.0341	0.0117	0.0225
252	0.0340	0.0116	0.0223
253	0.0338	0.0116	0.0222
254	0.0336	0.0115	0.0221
255	0.0335	0.0115	0.0220
256	0.0333	0.0114	0.0219
257	0.0332	0.0113	0.0218
258	0.0330	0.0113	0.0217
259	0.0329	0.0112	0.0216
260	0.0327	0.0112	0.0215
261	0.0326	0.0111	0.0214
262	0.0324	0.0111	0.0213
263	0.0323	0.0111	0.0213
264	0.0322	0.0110	0.0212
265	0.0320	0.0110	0.0211
266	0.0319	0.0109	0.0210
267	0.0318	0.0109	0.0209
268	0.0317	0.0108	0.0208
269	0.0315	0.0108	0.0208
270	0.0314	0.0108	0.0207
271	0.0313	0.0107	0.0206
272	0.0312	0.0107	0.0205
273	0.0311	0.0106	0.0204
274	0.0310	0.0106	0.0204
275	0.0309	0.0106	0.0203
276	0.0307	0.0105	0.0202
277	0.0306	0.0105	0.0202
278	0.0305	0.0104	0.0201
279	0.0304	0.0104	0.0200
280	0.0303	0.0104	0.0199
281	0.0302	0.0103	0.0199
282	0.0301	0.0103	0.0198
283	0.0300	0.0103	0.0198
284	0.0299	0.0102	0.0197
285	0.0298	0.0102	0.0196
286	0.0297	0.0102	0.0196
287	0.0296	0.0101	0.0195
288	0.0296	0.0101	0.0194

```
      ----------------------------------------------------------------------
      Total soil rain loss =      3.88(In)
      Total effective rainfall =      8.12(In)
      Peak flow rate in flood hydrograph =     25.61(CFS)
      ----------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        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       0.0007      0.11  Q         |         |         |         |
  0+10       0.0057      0.72  Q         |         |         |         |
  0+15       0.0138      1.18  VQ        |         |         |         |
  0+20       0.0231      1.35  VQ        |         |         |         |
  0+25       0.0331      1.45  VQ        |         |         |         |
  0+30       0.0434      1.50  VQ        |         |         |         |
  0+35       0.0538      1.52  V Q       |         |         |         |
  0+40       0.0644      1.53  V Q       |         |         |         |
  0+45       0.0750      1.54  V Q       |         |         |         |
  0+50       0.0857      1.55  V Q       |         |         |         |
  0+55       0.0964      1.55  V Q       |         |         |         |
  1+ 0       0.1071      1.56  V Q       |         |         |         |
  1+ 5       0.1178      1.56  |VQ       |         |         |         |
  1+10       0.1286      1.56  |VQ       |         |         |         |
  1+15       0.1394      1.56  |VQ       |         |         |         |
  1+20       0.1502      1.57  |VQ       |         |         |         |
  1+25       0.1610      1.57  |VQ       |         |         |         |
  1+30       0.1718      1.57  |VQ       |         |         |         |
  1+35       0.1826      1.57  |VQ       |         |         |         |
  1+40       0.1935      1.58  |VQ       |         |         |         |
  1+45       0.2044      1.58  |VQ       |         |         |         |
  1+50       0.2153      1.58  |VQ       |         |         |         |
  1+55       0.2262      1.58  | Q       |         |         |         |
  2+ 0       0.2371      1.59  | Q       |         |         |         |
  2+ 5       0.2481      1.59  | Q       |         |         |         |
  2+10       0.2590      1.59  | Q       |         |         |         |
  2+15       0.2700      1.60  | Q       |         |         |         |
  2+20       0.2810      1.60  | Q       |         |         |         |
  2+25       0.2921      1.60  | Q       |         |         |         |
  2+30       0.3031      1.60  | Q       |         |         |         |
  2+35       0.3142      1.61  | Q       |         |         |         |
  2+40       0.3253      1.61  | Q       |         |         |         |
  2+45       0.3364      1.61  | QV      |         |         |         |
  2+50       0.3475      1.62  | QV      |         |         |         |
  2+55       0.3586      1.62  | QV      |         |         |         |
  3+ 0       0.3698      1.62  | QV      |         |         |         |
  3+ 5       0.3810      1.62  | QV      |         |         |         |
  3+10       0.3922      1.63  | QV      |         |         |         |
  3+15       0.4034      1.63  | QV      |         |         |         |
  3+20       0.4147      1.63  | QV      |         |         |         |
  3+25       0.4260      1.64  | QV      |         |         |         |
  3+30       0.4373      1.64  | QV      |         |         |         |
  3+35       0.4486      1.64  | Q V     |         |         |         |
  3+40       0.4599      1.65  | Q V     |         |         |         |
  3+45       0.4713      1.65  | Q V     |         |         |         |
  3+50       0.4827      1.65  | Q V     |         |         |         |
  3+55       0.4941      1.66  | Q V     |         |         |         |
  4+ 0       0.5055      1.66  | Q V     |         |         |         |
  4+ 5       0.5169      1.66  | Q V     |         |         |         |
  4+10       0.5284      1.67  | Q V     |         |         |         |
  4+15       0.5399      1.67  | Q V     |         |         |         |
  4+20       0.5514      1.67  | Q V     |         |         |         |
  4+25       0.5630      1.68  | Q  V    |         |         |         |
  4+30       0.5746      1.68  | Q  V    |         |         |         |
  4+35       0.5861      1.68  | Q  V    |         |         |         |
  4+40       0.5978      1.69  | Q  V    |         |         |         |
  4+45       0.6094      1.69  | Q  V    |         |         |         |
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 4+50      0.6211     1.69  | Q  V    |         |         |         |
 4+55      0.6328     1.70  | Q  V    |         |         |         |
 5+ 0      0.6445     1.70  | Q  V    |         |         |         |
 5+ 5      0.6562     1.70  | Q  V    |         |         |         |
 5+10      0.6680     1.71  | Q   V   |         |         |         |
 5+15      0.6798     1.71  | Q   V   |         |         |         |
 5+20      0.6916     1.72  | Q   V   |         |         |         |
 5+25      0.7034     1.72  | Q   V   |         |         |         |
 5+30      0.7153     1.72  | Q   V   |         |         |         |
 5+35      0.7272     1.73  | Q   V   |         |         |         |
 5+40      0.7392     1.73  | Q   V   |         |         |         |
 5+45      0.7511     1.74  | Q   V   |         |         |         |
 5+50      0.7631     1.74  | Q   V   |         |         |         |
 5+55      0.7751     1.74  | Q    V  |         |         |         |
 6+ 0      0.7871     1.75  | Q    V  |         |         |         |
 6+ 5      0.7992     1.75  | Q    V  |         |         |         |
 6+10      0.8113     1.76  | Q    V  |         |         |         |
 6+15      0.8234     1.76  | Q    V  |         |         |         |
 6+20      0.8356     1.77  | Q    V  |         |         |         |
 6+25      0.8478     1.77  | Q    V  |         |         |         |
 6+30      0.8600     1.77  | Q    V  |         |         |         |
 6+35      0.8723     1.78  | Q    V  |         |         |         |
 6+40      0.8845     1.78  | Q     V |         |         |         |
 6+45      0.8969     1.79  | Q     V |         |         |         |
 6+50      0.9092     1.79  | Q     V |         |         |         |
 6+55      0.9216     1.80  | Q     V |         |         |         |
 7+ 0      0.9340     1.80  | Q     V |         |         |         |
 7+ 5      0.9464     1.81  | Q     V |         |         |         |
 7+10      0.9589     1.81  | Q     V |         |         |         |
 7+15      0.9714     1.82  | Q     V |         |         |         |
 7+20      0.9840     1.82  | Q     V |         |         |         |
 7+25      0.9965     1.83  | Q      V|         |         |         |
 7+30      1.0091     1.83  | Q      V|         |         |         |
 7+35      1.0218     1.84  | Q      V|         |         |         |
 7+40      1.0345     1.84  | Q      V|         |         |         |
 7+45      1.0472     1.85  | Q      V|         |         |         |
 7+50      1.0600     1.85  | Q      V|         |         |         |
 7+55      1.0727     1.86  | Q      V|         |         |         |
 8+ 0      1.0856     1.86  | Q      V|         |         |         |
 8+ 5      1.0984     1.87  | Q      V|         |         |         |
 8+10      1.1114     1.87  | Q       V         |         |         |
 8+15      1.1243     1.88  | Q       V         |         |         |
 8+20      1.1373     1.89  | Q       V         |         |         |
 8+25      1.1503     1.89  | Q       V         |         |         |
 8+30      1.1634     1.90  | Q       V         |         |         |
 8+35      1.1765     1.90  | Q       V         |         |         |
 8+40      1.1897     1.91  | Q       V         |         |         |
 8+45      1.2029     1.92  | Q       V         |         |         |
 8+50      1.2161     1.92  | Q        |V        |         |         |
 8+55      1.2294     1.93  | Q        |V        |         |         |
 9+ 0      1.2427     1.94  | Q        |V        |         |         |
 9+ 5      1.2561     1.94  | Q        |V        |         |         |
 9+10      1.2695     1.95  | Q        |V        |         |         |
 9+15      1.2830     1.96  | Q        |V        |         |         |
 9+20      1.2965     1.96  | Q        |V        |         |         |
 9+25      1.3100     1.97  | Q        |V        |         |         |
 9+30      1.3236     1.98  | Q        |V        |         |         |
 9+35      1.3373     1.98  | Q        | V       |         |         |
 9+40      1.3510     1.99  | Q        | V       |         |         |
 9+45      1.3648     2.00  | Q        | V       |         |         |
 9+50      1.3786     2.01  | Q        | V       |         |         |
 9+55      1.3925     2.01  | Q        | V       |         |         |
10+ 0      1.4064     2.02  | Q        | V       |         |         |
10+ 5      1.4204     2.03  | Q        | V       |         |         |
10+10      1.4344     2.04  | Q        | V       |         |         |
10+15      1.4485     2.05  | Q        |  V      |         |         |
10+20      1.4626     2.05  | Q        |  V      |         |         |
10+25      1.4768     2.06  | Q        |  V      |         |         |
10+30      1.4911     2.07  | Q        |  V      |         |         |
10+35      1.5054     2.08  | Q        |  V      |         |         |
10+40      1.5198     2.09  | Q        |  V      |         |         |
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10+45      1.5343     2.10  | Q       |  V      |         |         |
10+50      1.5488     2.11  | Q       |   V     |         |         |
10+55      1.5634     2.12  | Q       |   V     |         |         |
11+ 0      1.5780     2.13  | Q       |   V     |         |         |
11+ 5      1.5927     2.14  | Q       |   V     |         |         |
11+10      1.6075     2.15  | Q       |   V     |         |         |
11+15      1.6224     2.16  | Q       |   V     |         |         |
11+20      1.6373     2.17  | Q       |   V     |         |         |
11+25      1.6523     2.18  | Q       |   V     |         |         |
11+30      1.6674     2.19  | Q       |    V    |         |         |
11+35      1.6826     2.20  | Q       |    V    |         |         |
11+40      1.6979     2.21  | Q       |    V    |         |         |
11+45      1.7132     2.23  | Q       |    V    |         |         |
11+50      1.7286     2.24  | Q       |    V    |         |         |
11+55      1.7441     2.25  |  Q      |    V    |         |         |
12+ 0      1.7597     2.26  |  Q      |    V    |         |         |
12+ 5      1.7752     2.26  |  Q      |     V   |         |         |
12+10      1.7900     2.15  | Q       |     V   |         |         |
12+15      1.8043     2.07  | Q       |     V   |         |         |
12+20      1.8184     2.05  | Q       |     V   |         |         |
12+25      1.8325     2.05  | Q       |     V   |         |         |
12+30      1.8467     2.06  | Q       |     V   |         |         |
12+35      1.8610     2.07  | Q       |     V   |         |         |
12+40      1.8754     2.09  | Q       |     V   |         |         |
12+45      1.8899     2.11  | Q       |      V  |         |         |
12+50      1.9045     2.13  | Q       |      V  |         |         |
12+55      1.9193     2.14  | Q       |      V  |         |         |
13+ 0      1.9342     2.17  | Q       |      V  |         |         |
13+ 5      1.9493     2.19  | Q       |      V  |         |         |
13+10      1.9645     2.21  | Q       |      V  |         |         |
13+15      1.9799     2.23  | Q       |      V  |         |         |
13+20      1.9955     2.26  |  Q      |       V |         |         |
13+25      2.0112     2.29  |  Q      |       V |         |         |
13+30      2.0271     2.31  |  Q      |       V |         |         |
13+35      2.0432     2.34  |  Q      |       V |         |         |
13+40      2.0596     2.37  |  Q      |       V |         |         |
13+45      2.0761     2.40  |  Q      |       V |         |         |
13+50      2.0929     2.43  |  Q      |       V |         |         |
13+55      2.1098     2.47  |  Q      |        V|         |         |
14+ 0      2.1271     2.50  |  Q      |        V|         |         |
14+ 5      2.1445     2.54  |  Q      |        V|         |         |
14+10      2.1623     2.58  |  Q      |        V|         |         |
14+15      2.1803     2.62  |  Q      |        V|         |         |
14+20      2.1987     2.67  |  Q      |        V|         |         |
14+25      2.2174     2.71  |  Q      |         V         |         |
14+30      2.2364     2.76  |  Q      |         V         |         |
14+35      2.2558     2.81  |  Q      |         V         |         |
14+40      2.2756     2.87  |  Q      |         V         |         |
14+45      2.2958     2.93  |  Q      |         V         |         |
14+50      2.3164     3.00  |   Q     |         V         |         |
14+55      2.3376     3.07  |   Q     |         |V        |         |
15+ 0      2.3593     3.16  |   Q     |         |V        |         |
15+ 5      2.3817     3.24  |   Q     |         |V        |         |
15+10      2.4047     3.34  |   Q     |         |V        |         |
15+15      2.4284     3.45  |   Q     |         |V        |         |
15+20      2.4530     3.57  |   Q     |         | V       |         |
15+25      2.4776     3.57  |   Q     |         | V       |         |
15+30      2.4977     2.92  |  Q      |         | V       |         |
15+35      2.5148     2.49  |  Q      |         | V       |         |
15+40      2.5320     2.50  |  Q      |         | V       |         |
15+45      2.5502     2.64  |  Q      |         |  V      |         |
15+50      2.5709     3.00  |   Q     |         |  V      |         |
15+55      2.5955     3.57  |   Q     |         |  V      |         |
16+ 0      2.6292     4.90  |     Q   |         |  V      |         |
16+ 5      2.6995    10.21  |         |  Q      |   V     |         |
16+10      2.8759    25.61  |         |         |    V    |   Q     |
16+15      3.0102    19.51  |         |         |    QV   |         |
16+20      3.0759     9.53  |         | Q       |     V   |         |
16+25      3.1195     6.34  |       Q |         |      V  |         |
16+30      3.1545     5.07  |     Q   |         |      V  |         |
16+35      3.1835     4.22  |    Q    |         |      V  |         |
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16+40       3.2096      3.79  |    Q    |         |         V|         |
16+45       3.2341      3.57  |   Q     |         |         V|         |
16+50       3.2571      3.34  |   Q     |         |         V|         |
16+55       3.2784      3.08  |   Q     |         |         V|         |
17+ 0       3.2983      2.90  |  Q      |         |         V|         |
17+ 5       3.3175      2.79  |  Q      |         |          V         |
17+10       3.3360      2.69  |  Q      |         |          V         |
17+15       3.3539      2.60  |  Q      |         |          V         |
17+20       3.3713      2.52  |  Q      |         |          V         |
17+25       3.3882      2.45  |  Q      |         |          V         |
17+30       3.4046      2.38  |  Q      |         |          V         |
17+35       3.4206      2.33  |  Q      |         |          V         |
17+40       3.4362      2.27  |  Q      |         |          |V        |
17+45       3.4516      2.22  | Q       |         |          |V        |
17+50       3.4665      2.18  | Q       |         |          |V        |
17+55       3.4812      2.13  | Q       |         |          |V        |
18+ 0       3.4957      2.09  | Q       |         |          |V        |
18+ 5       3.5100      2.08  | Q       |         |          |V        |
18+10       3.5249      2.17  | Q       |         |          |V        |
18+15       3.5402      2.23  | Q       |         |          | V       |
18+20       3.5556      2.23  | Q       |         |          | V       |
18+25       3.5709      2.23  | Q       |         |          | V       |
18+30       3.5861      2.21  | Q       |         |          | V       |
18+35       3.6012      2.19  | Q       |         |          | V       |
18+40       3.6162      2.17  | Q       |         |          | V       |
18+45       3.6310      2.15  | Q       |         |          | V       |
18+50       3.6457      2.13  | Q       |         |          | V       |
18+55       3.6602      2.11  | Q       |         |          |  V      |
19+ 0       3.6746      2.09  | Q       |         |          |  V      |
19+ 5       3.6889      2.07  | Q       |         |          |  V      |
19+10       3.7031      2.06  | Q       |         |          |  V      |
19+15       3.7171      2.04  | Q       |         |          |  V      |
19+20       3.7311      2.02  | Q       |         |          |  V      |
19+25       3.7449      2.01  | Q       |         |          |  V      |
19+30       3.7586      1.99  | Q       |         |          |   V     |
19+35       3.7723      1.98  | Q       |         |          |   V     |
19+40       3.7858      1.96  | Q       |         |          |   V     |
19+45       3.7992      1.95  | Q       |         |          |   V     |
19+50       3.8126      1.94  | Q       |         |          |   V     |
19+55       3.8258      1.92  | Q       |         |          |   V     |
20+ 0       3.8390      1.91  | Q       |         |          |   V     |
20+ 5       3.8521      1.90  | Q       |         |          |   V     |
20+10       3.8651      1.89  | Q       |         |          |   V     |
20+15       3.8780      1.88  | Q       |         |          |    V    |
20+20       3.8909      1.87  | Q       |         |          |    V    |
20+25       3.9036      1.85  | Q       |         |          |    V    |
20+30       3.9163      1.84  | Q       |         |          |    V    |
20+35       3.9289      1.83  | Q       |         |          |    V    |
20+40       3.9415      1.82  | Q       |         |          |    V    |
20+45       3.9540      1.81  | Q       |         |          |    V    |
20+50       3.9664      1.80  | Q       |         |          |    V    |
20+55       3.9788      1.79  | Q       |         |          |     V   |
21+ 0       3.9911      1.78  | Q       |         |          |     V   |
21+ 5       4.0033      1.78  | Q       |         |          |     V   |
21+10       4.0155      1.77  | Q       |         |          |     V   |
21+15       4.0276      1.76  | Q       |         |          |     V   |
21+20       4.0396      1.75  | Q       |         |          |     V   |
21+25       4.0516      1.74  | Q       |         |          |     V   |
21+30       4.0635      1.73  | Q       |         |          |     V   |
21+35       4.0754      1.73  | Q       |         |          |     V   |
21+40       4.0873      1.72  | Q       |         |          |     V   |
21+45       4.0990      1.71  | Q       |         |          |      V  |
21+50       4.1108      1.70  | Q       |         |          |      V  |
21+55       4.1224      1.70  | Q       |         |          |      V  |
22+ 0       4.1341      1.69  | Q       |         |          |      V  |
22+ 5       4.1456      1.68  | Q       |         |          |      V  |
22+10       4.1572      1.67  | Q       |         |          |      V  |
22+15       4.1687      1.67  | Q       |         |          |      V  |
22+20       4.1801      1.66  | Q       |         |          |      V  |
22+25       4.1915      1.65  | Q       |         |          |      V  |
22+30       4.2028      1.65  | Q       |         |          |       V |
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  22+35       4.2141      1.64  | Q       |         |         |       V |
  22+40       4.2254      1.63  | Q       |         |         |       V |
  22+45       4.2366      1.63  | Q       |         |         |       V |
  22+50       4.2478      1.62  | Q       |         |         |       V |
  22+55       4.2589      1.62  | Q       |         |         |       V |
  23+ 0       4.2700      1.61  | Q       |         |         |       V |
  23+ 5       4.2811      1.61  | Q       |         |         |       V |
  23+10       4.2921      1.60  | Q       |         |         |       V |
  23+15       4.3031      1.59  | Q       |         |         |       V |
  23+20       4.3140      1.59  | Q       |         |         |        V|
  23+25       4.3249      1.58  | Q       |         |         |        V|
  23+30       4.3358      1.58  | Q       |         |         |        V|
  23+35       4.3466      1.57  | Q       |         |         |        V|
  23+40       4.3574      1.57  | Q       |         |         |        V|
  23+45       4.3681      1.56  | Q       |         |         |        V|
  23+50       4.3789      1.56  | Q       |         |         |        V|
  23+55       4.3896      1.55  | Q       |         |         |        V|
  24+ 0       4.4002      1.55  | Q       |         |         |        V|
  24+ 5       4.4101      1.44  |Q        |         |         |        V|
  24+10       4.4157      0.82  |Q        |         |         |        V|
  24+15       4.4182      0.36  Q         |         |         |        V|
  24+20       4.4195      0.19  Q         |         |         |        V|
  24+25       4.4202      0.09  Q         |         |         |        V|
  24+30       4.4205      0.04  Q         |         |         |        V|
  24+35       4.4206      0.02  Q         |         |         |        V|
  24+40       4.4207      0.01  Q         |         |         |        V|
  24+45       4.4208      0.01  Q         |         |         |        V|
  24+50       4.4208      0.00  Q         |         |         |         V
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Area 'D' – 2 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area 'D' – 5 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area 'D' – 10 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area 'D' – 25 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area 'D' – 100 Year 24 Hour - Proposed Condition – Unit Hydrograph

NO CHANGE FROM EXISTING CONDITION

Area ‘E’ – 2 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘E’ – 5 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘E’ – 10 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘E’ – 25 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘E’ – 100 Year 24 Hour - Proposed Condition – Unit Hydrograph

NO CHANGE FROM EXISTING CONDITION

Area ‘F’ – 2 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘F’ – 5 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘F’ – 10 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘F’ – 25 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘F’ – 100 Year 24 Hour - Proposed Condition – Unit Hydrograph

MERGED WITH PROPOSED CONDITION - AREA ‘B’

Area ‘G’ – 2 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘G’ – 5 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘G’ – 10 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘G’ – 25 Year 24 Hour - Proposed Condition – Unit Hydrograph

Area ‘G’ – 100 Year 24 Hour - Proposed Condition – Unit Hydrograph

MERGED WITH PROPOSED CONDITION - AREA ‘A’

Attachment 5

Debris Basin Sizing

TTM 20707 - DEBRIS BASINS

SE-2 Basin Design Option 1

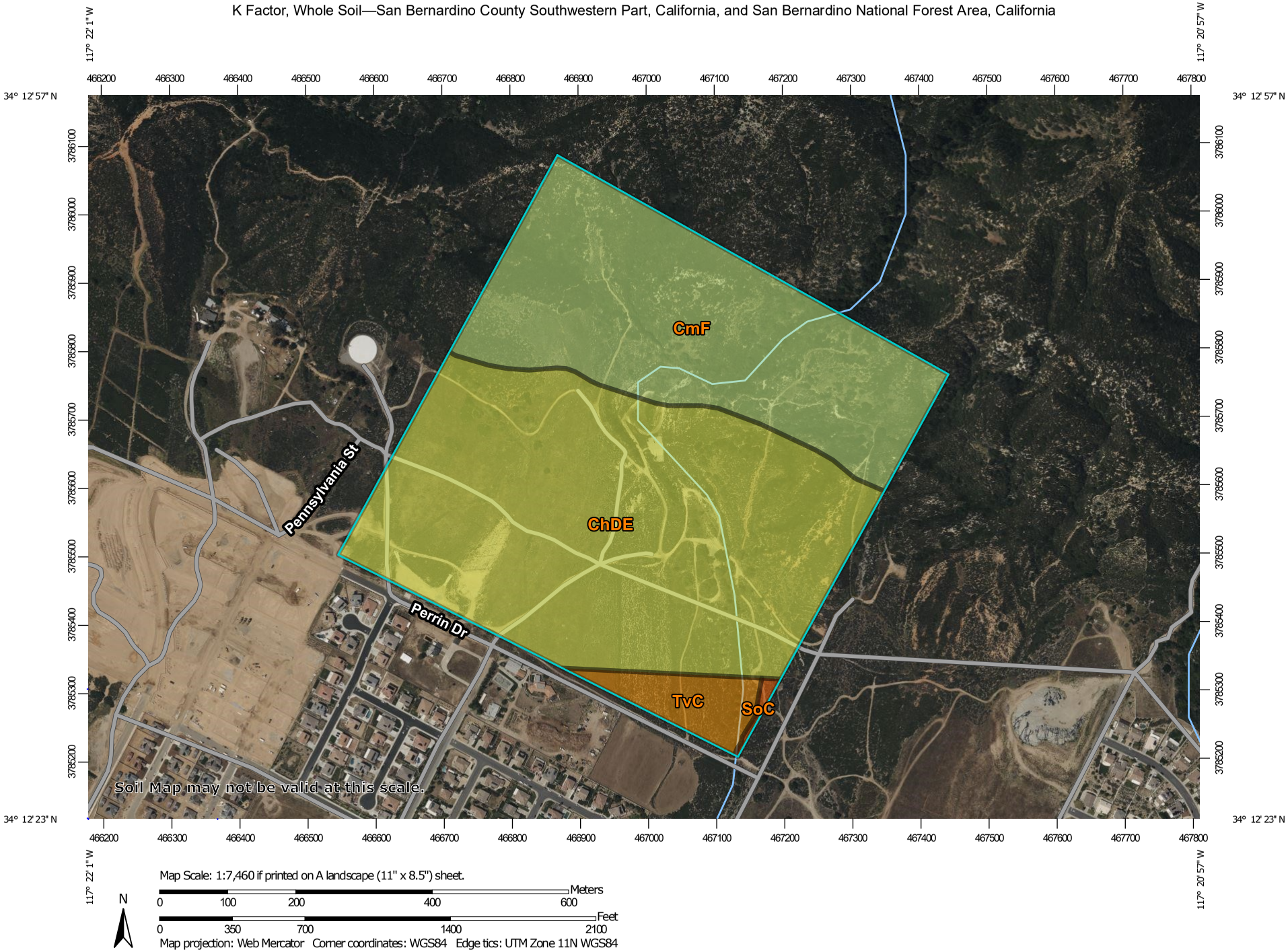
		DMA 'B'	DMA 'E'
As = 1.2 Q/Vs (area is sq ft)	As =	45,214	142,770
As = minimum surface area for trapping soil particles of a certain size	Q =	10.55	33.31
Vs = settling velocity of the design particle size chosen (Vs=0.00028 ft/s for a design particle size of 0.01 mm at 68 degree F)	Vs =	0.00028	0.00028

Q=CIA		DMA 'B'	DMA 'E'
Q = peak basin influent flow rate measured in ft3/s	Q =	10.55	33.31
C = runoff coefficient (unitless) = 0.3	C =	0.3	0.3
I = peak rainfall intensity for the 10-year, 6-hour rain event (in/hr) = 2.13	I =	3.029	3.029
A = area draining into the sediment basin in acres	A =	11.61	36.66

CASQA RUSLE Sediment Basin Volume Calculations		DMA 'B'	DMA 'E'
A=R x K x LS x C x P	A=	28.3	28.3
A= annual soil loss, tons/acre-year			
R= rainfall erosion index, in 100 ft.tons/acre.in/hr	R =	70	70
K= soil erodibility factor, tons/acre per unit of R	K =	0.204	0.204
LS = slope length and steepness factor (unitless)	LS =	1.98	1.98
C = vegetative cover factor (unitless)	C =	1	1
P = erosion control practice factor (unitless)	P =	1	1

	DMA 'B'	DMA 'E'
Weight of the loose soil = 121 lb/ft3 = 121 x 0.0005 lb/ton = 0.0605 tons/ft3	0.0605	0.0605
Annual soil loss volume = A / Weight of soil = 3.75 / 0.0605 = 61.98 ft3/acre	467.3	467.3
Soil Loss Volume = 467.35 x Tributary Area / 27 = cy	201	635

Sediment Basin Spillway Width Calculations		DMA 'B'	DMA 'E'
Minimum size of the spillway required = 1 ft / acre of tributary area			
Minimum width of spillway = At / h (feet)	W =	8	24
At = sediment basin tributary area	At =	11.61	36.66
h = spillway height = 1.5 ft	H =	1.5	1.5
Width = 1.5 / 1.5 = 1 ft			


117° 22' 1" W
117° 20' 57" W
34° 12' 57" N
34° 12' 23" N
466200
466300
466400
466500
466600
466700
466800
466900
467000
467100
467200
467300
467400
467500
467600
467700
467800
3786100
3786000
3785900
3785800
3785700
3785600
3785500
3785400
3785300
3785200
CmF
ChDE
TvC
SoC
Pennsylvania St
Perrin Dr
Soil Map may not be valid at this scale.
Map Scale: 1:7,460 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 100 200 400 600
Feet
0 350 700 1400 2100
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Soil Rating Lines
- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Soil Rating Points
- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 16, Aug 30, 2024

Soil Survey Area: San Bernardino National Forest Area, California
Survey Area Data: Version 16, Sep 3, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 17, 2022—Jun 12, 2022

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
SoC	Soboba gravelly loamy sand, 0 to 9 percent slopes	.05	0.4	0.3%
TvC	Tujunga gravelly loamy sand, 0 to 9 percent slopes	.10	4.3	4.0%
Subtotals for Soil Survey Area			**4.6**	**4.4%**
Totals for Area of Interest			**106.5**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ChDE	Ramona family-Typic Xerorthents, warm association, 2 to 30 percent slopes	.20	62.6	58.8%
CmF	Osito-Modesto families association, 30 to 50 percent slopes	.24	39.3	36.9%
Subtotals for Soil Survey Area			**101.9**	**95.6%**
Totals for Area of Interest			**106.5**	**100.0%**

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)