Preliminary
Hydrology Study & Drainage Analysis

Route 66
Residential Project
Foothill Blvd

City of San Bernardino, CA 92410

APN(s): 0142-041-09,10,11,17,18,
20,21,32,33,34 & 44
0142-521-01, -02

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April 2024

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A. Introduction

1.1 Purpose & Scope

The following Hydrology & Hydraulics Study has been prepared for the development of the Route 66-Residential Project located approximately 13.92-acres in the City of San Bernardino, CA. This report has been prepared to satisfy the City of San Bernardino Hydrology requirements per San Bernardino County Department of Public Works Hydrology/Hydraulics requirements for developments of this type.

The scope of this Study is as follows:

- Identification of floodplain(s) impacting the site.
- Identification of existing conditions off-site tributary drainage areas and calculation of total peak flow rates and run-on/run-off volumes impacting the project site.
- Identification of existing conditions on-site drainage areas and calculation of peak flow rates and runoff volumes for these areas.
- Identification of proposed on-site hydrologic conditions & site/drainage plan.
- Identification of required storm water mitigation due to development.
- Sizing of on-site storm drain improvements.
- Summary of Findings & Conclusion

1.2 Project Overview

The project site is located approximately 2.21 miles west of Interstate 215 and 5.32 miles north of Interstate 10, north of Foothill Blvd and Macy St. The proposed project entails the construction and development of a residential development consisting of approximately 134 residential lots on approximately 15.71-acres. The site will have paved internal private roads and parking area. A portion of the site will include open areas, landscaping and underground chamber systems to meet the requirements of water quality and site hydrology per City requirements.

1.3 Existing Conditions Off-Site Areas

The project site zone area is zoned "CG-1 General Commercial" per the City San Bernardino zoning map. Portions of the site front Macy Street to the east and Foothill Blvd to the south. To the north of the property is residential lots. To the west is general commercial and partially vacant property. The existing site slopes mainly to the southeast towards the intersection of Foothill Blvd and Macy Street. A portion of the western site sloped to the west. There is no significant off-site tributary.

1.4 Existing Conditions On-Site Areas

The existing on-site project area is undeveloped and is generally flat. The majority of the project site slopes to the southeast with a portion of the western site sloping to the west. The site is covered with annual grass/weeds of fair cover.

1.5 References

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

1.) San Bernardino County Department of Public Works Hydrology Manual, August 1986 and all addendums.

2.) Site plans by Joseph E. Bonadiman & Associates, Inc., April 2024.

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 Study. On-site calculations were performed using the Rational and Unit Hydrograph methods per County requirements for the Santa Ana River watershed.

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

1.2 Sources of Topography

Mapping of existing condition on-site and off-site area and topographic contours were provided by Aerotech Mapping, Inc. , dated November 2020.

1.3 FEMA Floodplain Identification & Considerations

The majority of the site is located in an unshaded Zone X, "Areas determined to be outside the 0.2% annual chance floodplain.

Refer to Exhibit "C" for FEMA Map No. 06071C8676J & 06071C8677J.

1.4 Watershed Precipitation

Precipitation values used in this report were obtained from the isohyetal maps included in the San Bernardino County Hydrology Manual and are tabulate below. The slope of intensity duration curve value of 0.60 (valley areas) was used per the County Hydrology Manual.

Table 1 – Precipitation Values (Rational Method Calculations)

STORM	PRECIPITATION
10-YEAR, 1-HOUR	0.91
100-YEAR, 1-HOUR	1.31

Table 2 – Precipitation Values (Unit Hydrograph Calculations)

STORM	PRECIPITATION
10-YEAR, 1-HOUR	0.91
100-YEAR, 1-HOUR	1.31
2-YEAR, 6-HOUR	1.58
100-YEAR, 6-HOUR	3.25
2-YEAR, 24-HOUR	2.75
100-YEAR, 24-HOUR	6.80

Refer to Exhibit "D" for the San Bernardino County Hydrology Manual isohyetal maps used in this report.

1.5 Watershed Losses

Soil types and SCS Curve Number (AMC II) used in this report were obtained from the Soils Group maps and Figures C-2 & 3, included in the San Bernardino County Hydrology Manual, and are tabulated below.

Type "A" & "B" is shown for the entire area of study per Figure C-6 of the San Bernardino County Hydrology Manual. The existing project site is generally undeveloped, consisting of a dirt lot with poor cover, consisting of annual grasses. A small portion of the southwestern project site consists of existing commercial development. Per the San Bernardino County Hydrology Manual Figure C-2 & 3, the SCS Curve Number (AMC II) used for existing conditions, pervious areas ("Grass, Annual or Perennial) are 67 for Type "A" soil and 78 for Type "B" soil. The SCS Curve Number (AMC II) used for developed conditions pervious areas ("Landscape") are 32 for Type "A" soil and 56 for Type "B" soil. For impervious areas, parking lots, roofs, driveways, etc, an SCS Curve Number (AMC II) of 98 was used.

Table 3 – Developed Condition Soil Loss Rates

COVER TYPE	SOIL TYPE	QUALITY OF COVER	SCS CURVE NO. (AMC II)
Grass Annual/Perennial	A	POOR	67
	B	POOR	78
Landscape	A	GOOD	32
	B	GOOD	56
Impervious Area	A & B	~	98

Refer to Exhibit "E" for the San Bernardino County Hydrology Manual soils maps and SCS Curve Number per Figure C-2 & 3 and C-6 used in this report.

1.6 Rational Hydrology Method & Unit Hydrograph Hydrology Method Calculations

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

C. Existing Conditions Hydrology Calculations & Summary

1.1. Existing Conditions Rational Method Calculations

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

Table 4 – Existing Conditions Rational Method Input Values

AREA	SIZE (AC)	TYPE	COVER	SOIL	SCS (AMC II)		PERVIOUS FRACTION	U.S. ELEV. (FT)	D.S. ELEV. (FT)	LENGTH (FT)
A Node 0-1	9.90	Grass	Poor	A = 50% B = 50%	67 78	73	0.97	1208.4	1193.5	869
B Node 0-2	5.81	Grass	Poor	A = 50% B = 50%	67 78	73	0.76	1208.4	1200.0	458

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

Table 5 – Existing Conditions Rational Method Output Calculations

AREA	NODE	Q_{10} (CFS)	Q_{100} (CFS)
A	0-1	**12.87**	**22.81**
TC_{100} (MIN)		**17.36**	
B	0-2	**10.62**	**17.26**
TC_{100} (MIN)		**11.92**	

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 6 – Existing Conditions Unit Hydrograph Method Input Values

DRAINAGE AREA	SIZE (AC)	SCS	PERVIOUS FRACTION	TC_{100} (HR)
A	9.90	73	0.97	0.29
B	5.81	73	0.79	0.20

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

Table 7 – 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	9.90	**5.45**	**7.82**	**11.75**	**14.45**	**20.99**	0.232
B	5.81	**4.38**	**6.06**	**8.44**	**10.25**	**14.21**	0.16

DRAINAGE AREA	SIZE (AC)	VOL_2 (AF)	VOL_5 (AF)	VOL_{10} (AF)	VOL_{25} (AF)	Q_{100} (AF)	LAG_{100} (HR)
A	9.90	**0.2981**	**0.5811**	**1.7174**	**2.3417**	**4.6780**	0.232
B	5.81	**0.3711**	**0.5911**	**1.1988**	**1.5822**	**2.8277**	0.16

Refer to Attachment No. 2 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 final conditions rational method calculations were adjusted accordingly and are tabulated below:

Table 8 – Developed Conditions Rational Method Input Values

AREA	SIZE (AC)	TYPE	SOIL	SCS (AMC II)		PERVIOUS FRACTION	U.S. ELEV. (FT)	D.S. ELEV. (FT)	LENGTH (FT)
A1 Node 0-1	4.81	Landscape	A = 50% B = 50%	32 56	44	0.42	1209.10	1197.63	762.83
Pipe Node 1-2	24"	~	~	~	~	~	1193.63	1192.33	267.83
CONFLUANCE 1 OF 2									
A2 Node 3-4	5.64	Landscape	A = 50% B = 50%	32 56	44	0.38	1208.20	1197.71	721.84
CONFLUANCE 2 OF 2									
B Node 0-1	5.26	Landscape	A = 50% B = 50%	32 56	44	0.37	1208.80	1200.38	760.72
Pipe Node 1-2	24"	~	~	~		~	1198.78	1198.61	34.87

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

Table 9 – Developed Conditions Rational Method Output Calculations

AREA	NODE	Q_{10} (CFS	Q_{100} (CFS)
A	0-4	**18.75**	**29.30**
TC_{100} (MIN)1		**11.94**	
B	0-2	**9.35**	**14.58**
TC_{100} (MIN)		**12.88**	

Refer to Attachment No. 3 for printouts of the final condition rational method calculations.
Refer to Exhibit "G" for the Final 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 10 – Developed Conditions Unit Hydrograph Method Input Values

DRAINAGE AREA	SIZE (AC)	SCS	PERVIOUS FRACTION	TC_{100} (HR
A	10.45	44	0.40	0.20

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

Table 11 Developed Conditions Unit Hydrograph Method Output Calculations

DRAINAGE AREA	SIZE (AC)	Q_2 (CFS)	Q_{10} (CFS	Q_{25} (CFS)	Q_{100} (CFS)	LAG_{100} (HR)
A	10.45	**12.30**	**19.32**	**23.20**	**30.26**	0.16

DRAINAGE AREA	SIZE (AC)	VOL_2 (AF)	VOL_{10} (AF)	VOL_{25} (AF)	VOL_{100} (AF)	LAG_{100} (HR)
A	10.45	**1.3783**	**2.3768**	**2.9868**	**4.5324**	0.16

Refer to Attachment No. 4 for printouts of the existing conditions unit hydrograph calculations.
Refer to Exhibit "F" for the Existing Conditions Hydrology Study Map.

E. Detention Basin Calculations

1.1 Detention Basin Analysis

A detention/retention basin is proposed to attenuate storm flows and for WQMP volume retention and infiltration. Input values of the depth vs. volume for detention basin routing calculations prepared for this report are tabulated as follows:

Table 12 – Detention Basins A, System Depth vs. Volume

DEPTH (FT)	TOTAL VOLUME (CF)	DETENTION VOLUME (AF)
0.00	0	0
0.50	1431	0.033
1.50	5679	0.130
2.50	10911	0.250
3.50	19529	0.381
4.50	22485	0.516
5.23 OUTLET	26794	0.615
5.50	28372	0.651
6.50	34059	0.782
7.50	39290	0.902
8.50	43538	1.000
10.00	47831	1.098

Output for the detention basin routing calculations are tabulated as follows:

Table 13 – Detention Basins Output Calculations

BASIN AREA	STORM EVENT	OUTLET (IN)	OUTLET U.S. ELEV. (FT)	OUTLET D.S. ELEV. (FT)	Δ ELEV. (FT)	OUTLET LENGTH (FT)	OUTFLOW PEAK Q (CFS)	BASIN WATER DEPTH (FT)
A	2	15" PIPE OUTLET	1195.09	1193.41	0.50	336.84	0	4.01
	10						5.07	6.24
	25						8.86	7.85
	100						11.49	9.95

F. Summary & Conclusion

1.1 Summary

A summary of the results of the Rational Method calculations are tabulated below:

Table 14 –Rational Method Calculations Summary

AREA	STORM EVENT	EXISTING CONDITIONS PEAK Q (CFS)	DEVELOPED CONDITIONS TOTAL PEAK Q (CFS)	INCREASE (CFS)*
A	10	12.87	18.75	5.88
	100	22.81	29.30	6.49
B	10	10.62	9.35	*-1.27*
	100	17.26	14.58	*-2.68*

*** Above listed values are results prior to basin routing & WQMP storage and not reflective of actual site discharge.**

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)*
A	2	5.45	12.30	6.85	0.2981	1.3783	1.0802
	10	11.75	19.32	7.57	1.7174	2.3768	0.6594
	25	14.45	23.20	8.75	2.3417	2.9868	0.6451
	100	20.99	30.26	9.27	4.6780	4.5324	*-0.1456*

*** Above listed values are results prior to basin routing & WQMP storage and not reflective of actual site discharge.**

As indicated above, Area "A" results in an increase in peak flow and runoff volume due to the proposed development. Area "B" results in a decrease in peak flow rate and does not require mitigation. The increase in flow rates for Area "A" 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 "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. A summary of the maximum allowable peak flow rates are tabulated below:

Table 16 – Outlet Requirements

EXISTING AREA	STORM EVENT	EXISTING CONDITIONS PEAK Q (CFS)	ADJUSTED PEAK Q (CFS)	MAXIMUM ALLOWABLE DISCHARGE 90% OF ADJUSTED PEAK Q (CFS)
A	2	5.45	Q_2=5.45	**4.91**
	10	11.75	Q_5=7.82	**7.04**
	25	14.45	Q_{10}=11.75	**10.58**
	100	20.99	Q_{25}=14.45	**13.01**

Due to the fact that the site is in a low area and there is not sufficient elevation to accommodate an onsite detention basin. The only option to mitigate storm water flow is an underground infiltration retention/detention system. This system will need to be capable of capturing storm flows from the 100-year event and provide enough capacity in order to reduce the total site discharge to 90% of the predeveloped condition.

Table 17 – Detention Basins Routing Summary

STORM EVENT	MAXIMUM ALLOWABLE SITE DISCHARGE 90% OF PEAK Q (CFS)	OUTFLOW PEAK Q (CFS)	BASIN WATER DEPTH (FT)	INCREASED DISCHARGE VOLUME (AF)*
2	4.91	0	4.01	1.0802
10	7.04	5.07	6.24	0.6594
25	10.58	8.86	7.85	0.6451
100	13.01	11.49	9.95	*-0.1456*

* Above listed values do not reflect WQMP storage volume.

Refer to Attachment No. 6 for a printout of the spillway width calculation calculations for the proposed basins system.

1.2 Conclusion

As indicated in Table 14, an increase in peak flow and runoff volume is expected for Area "A", due to the proposed development. The increase in flow rates for Area "A" 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 Detention Basin Design Criteria.

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 can be achieved for Area "A" with the use of an underground storm infiltration chamber with the capacity of 1.098 acer-feet (47,831CF). Onsite drainage for Area "A" shall be captured onsite and directed to the underground storm infiltration chamber prior to leaving the site. The underground chamber system will have a bed a length of 159 ft and bed width of 45 ft. The underground chamber system will have a top gravel depth of 1.5 ft, bottom gravel depth of 0.5ft, and a pipe diameter of 8ft for a total system depth of 10 ft. The underground storm infiltration chamber shall be equipped with an 15" outlet pipe, sloping away at 0.5%, and shall be located 5.23 from the bottom of the system. The above stated volume will reduce discharge from all studied storm events to less than 90% of the pre-development conditions as shown in Table 17.

The outlet from Area "A" shall be conveyed to Foothill Blvd via 15" pipe to a 6-foot wide 6-foot parkway culvert per City Standard 400 or discharged to the storm drain in Foothill Boulevard. Conveyance of site drainage over the Driveway approaches is not permitted.

Developed flows from the western portion of the site, Area "B", result in a reduction in flow rate and therefore do not require mitigation. Flows from Area "B" can be discharged directly to Foothill Blvd after any required Water Quality treatment. Overflow from Area "B" shall be conveyed to Foothill Blvd via 6-foot wide 6-foot parkway culvert per City Standard 400. Conveyance of site drainage over the Driveway approaches is not permitted.

With the above mitigation measure the development of the Route 66- Residential project will not have a negative impact on downstream properties or facilities. Refer to project specific WQMP for additional requirements.

(END)

EXHIBIT “A”

Project Watershed
Aerial Photo

AERIAL PHOTO EXHIBIT
ROUTE 66 - RESIDENTIAL PROJECT
IN THE CITY OF SAN BERNARDINO, CA

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CIVILDESIGN®
Software for Engineers, By Engineers

PREPARED FOR:

BY	MARK	REVISION DESCRIPTION	DATE

PREPARED FOR:	ROUTE 66 - RESIDENTIAL PROJECT
JOB NO:	235132
PREPARED BY:	JTS
CHECKED BY:	JTS

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AERIAL PHOTO EXHIBIT
ROUTE 66 - RESIDENTIAL PROJECT
IN THE CITY OF SAN BERNARDINO, CA

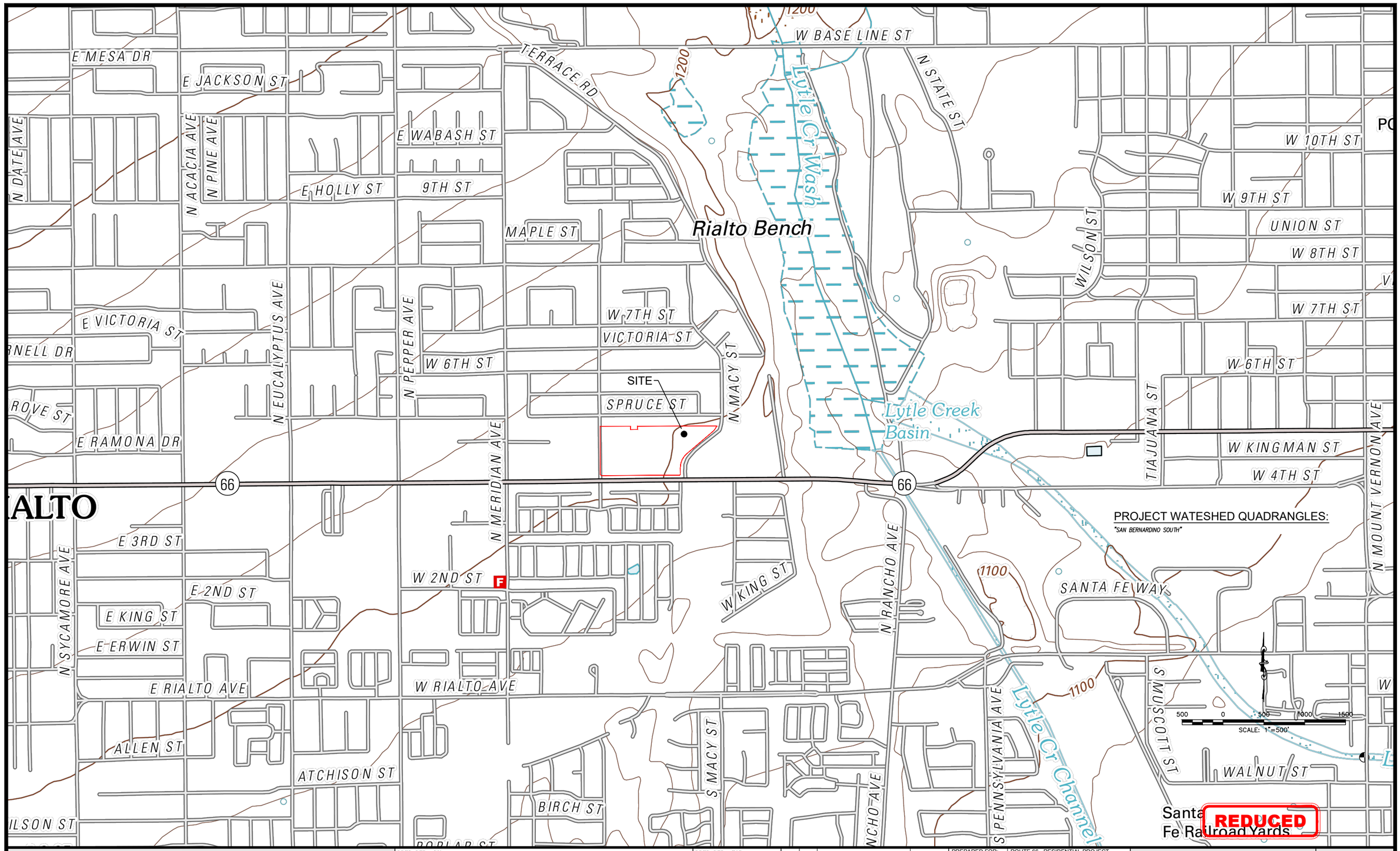
DISREGARD PRINTS BEARING EARLIER REVISION DATES → 04-16-24

A

SHEET 1 OF 1

EXHIBIT “B”

Project Watershed
USGS Quadrangle



USGS QUADRANGLE EXHIBIT
ROUTE 66 - RESIDENTIAL PROJECT
IN THE CITY OF SAN BERNARDINO, CA

PREPARED BY:
BONADIMAN
CIVILDESIGN

PREPARED FOR:

BY	MARK	REVISION DESCRIPTION	DATE

PREPARED FOR:	ROUTE 66 - RESIDENTIAL PROJECT
JOB NO:	235132
PREPARED BY:	JTS
CHECKED BY:	JTS

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USGS QUADRANGLE EXHIBIT
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DISREGARD PRINTS BEARING EARLIER REVISION DATES → 04-16-24

B

SHEET 1 OF 1

EXHIBIT “C”

FEMA Floodplain Maps

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/.

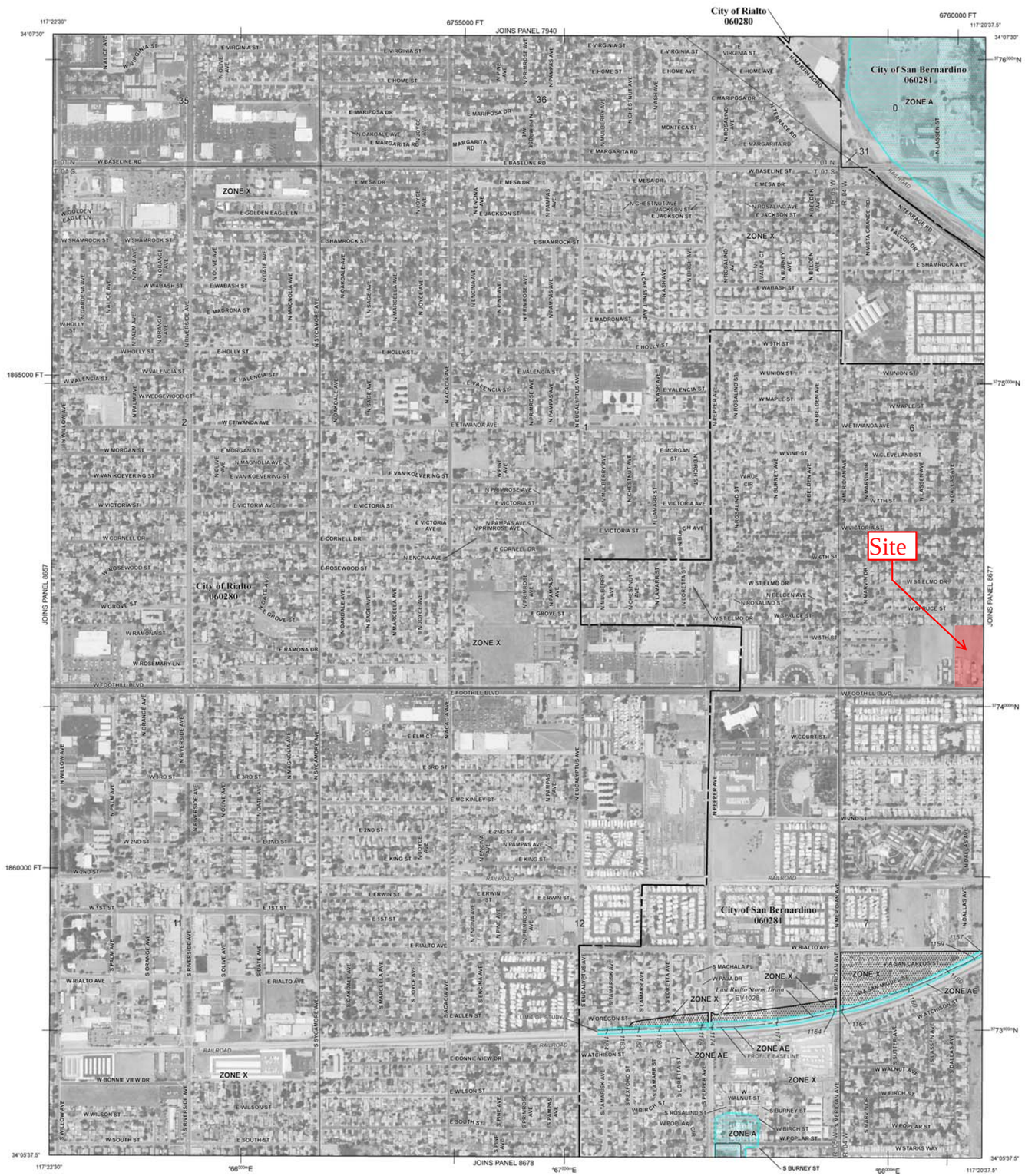
Base map information shown on this FIRM was provided in digital format by the San Bernardino County ISD.GIS Department, United States Geological Survey, the Bureau of Land Management, the United States Department of Agriculture, and the National Geodetic Survey. The imagery was flown by U.S. Department 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.



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
- 6000000 FT — 1000-meter Universal Transverse Mercator grid values, zone 11
- DX5510 — 5000-foot grid ticks: California State Plane coordinate system, Zone V (FIPSZONE = 405), Lambert projection
- M1.5 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- 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 add 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" = 500'

250 0 250 500 750 1,000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 8676J

FIRM

FLOOD INSURANCE RATE MAP

SAN BERNARDINO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 8676 OF 9400

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
RIALTO, CITY OF	060280	8676	J
SAN BERNARDINO, CITY OF	060281	8676	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
06071C8676J

MAP REVISED
SEPTEMBER 2, 2016

Federal Emergency Management Agency

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/.

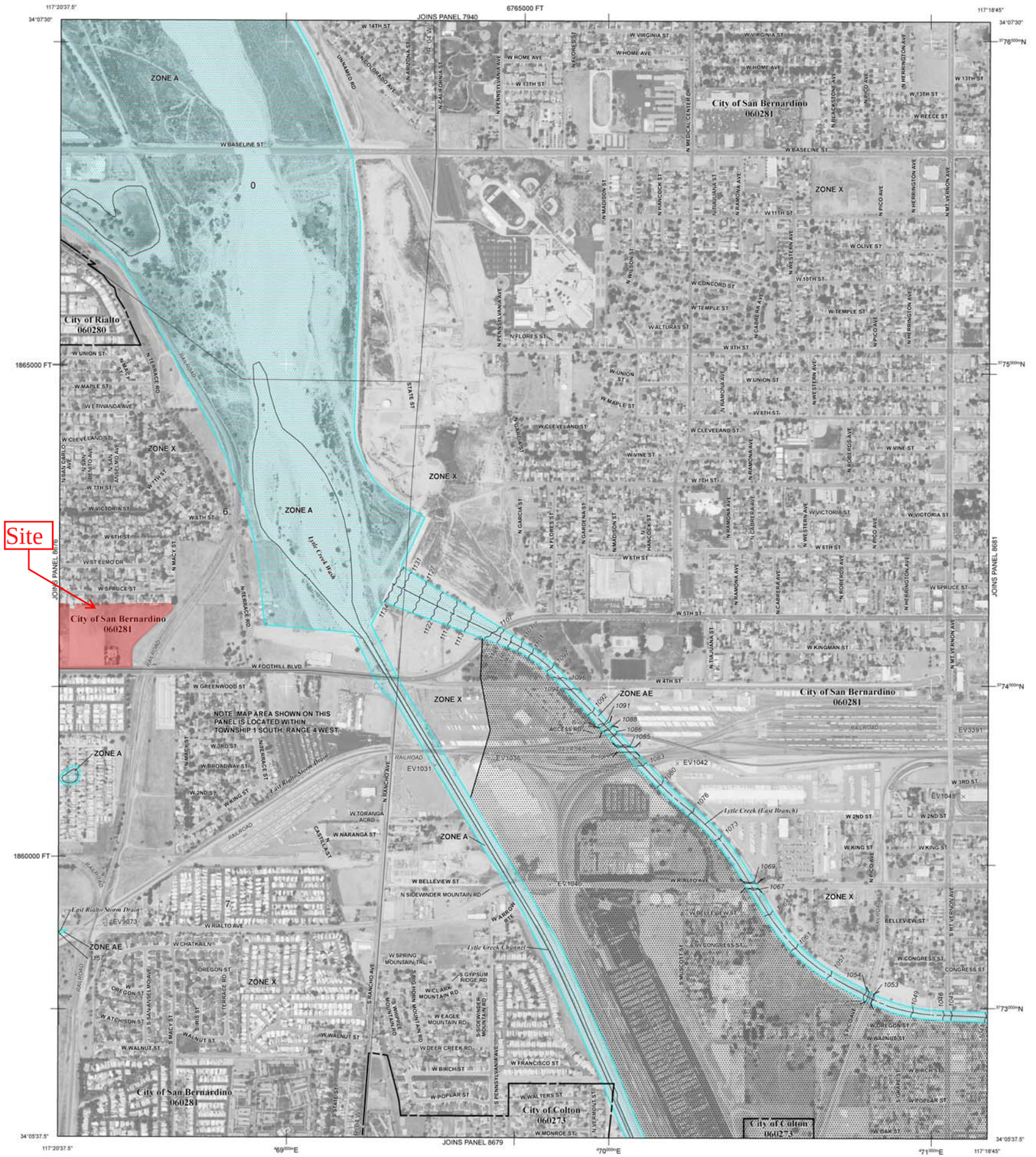
Base map information shown on this FIRM was provided in digital format by the San Bernardino County ISD.GIS Department, United States Geological Survey, the Bureau of Land Management, the United States Department of Agriculture, and the National Geodetic Survey. The imagery was flown by U.S. Department 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.



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
*6765000mE — 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 add 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.

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MAP SCALE 1" = 500'
250 0 250 500 750 1,000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 8677J

FIRM
FLOOD INSURANCE RATE MAP
SAN BERNARDINO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 8677 OF 9400
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COLTON, CITY OF	060273	8677	J
RIALTO, CITY OF	060280	8677	J
SAN BERNARDINO, CITY OF	060281	8677	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
06071C8677J
MAP REVISED
SEPTEMBER 2, 2016

Federal Emergency Management Agency

EXHIBIT “D”

San Bernardino County
Hydrology Manual
Isohyetal Maps

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

REDUCED DRAWING
SCALE 1" = 4 MILES

LEGEND:
.8 ISOLINES PRECIPITATION (INCHES)

0.91"

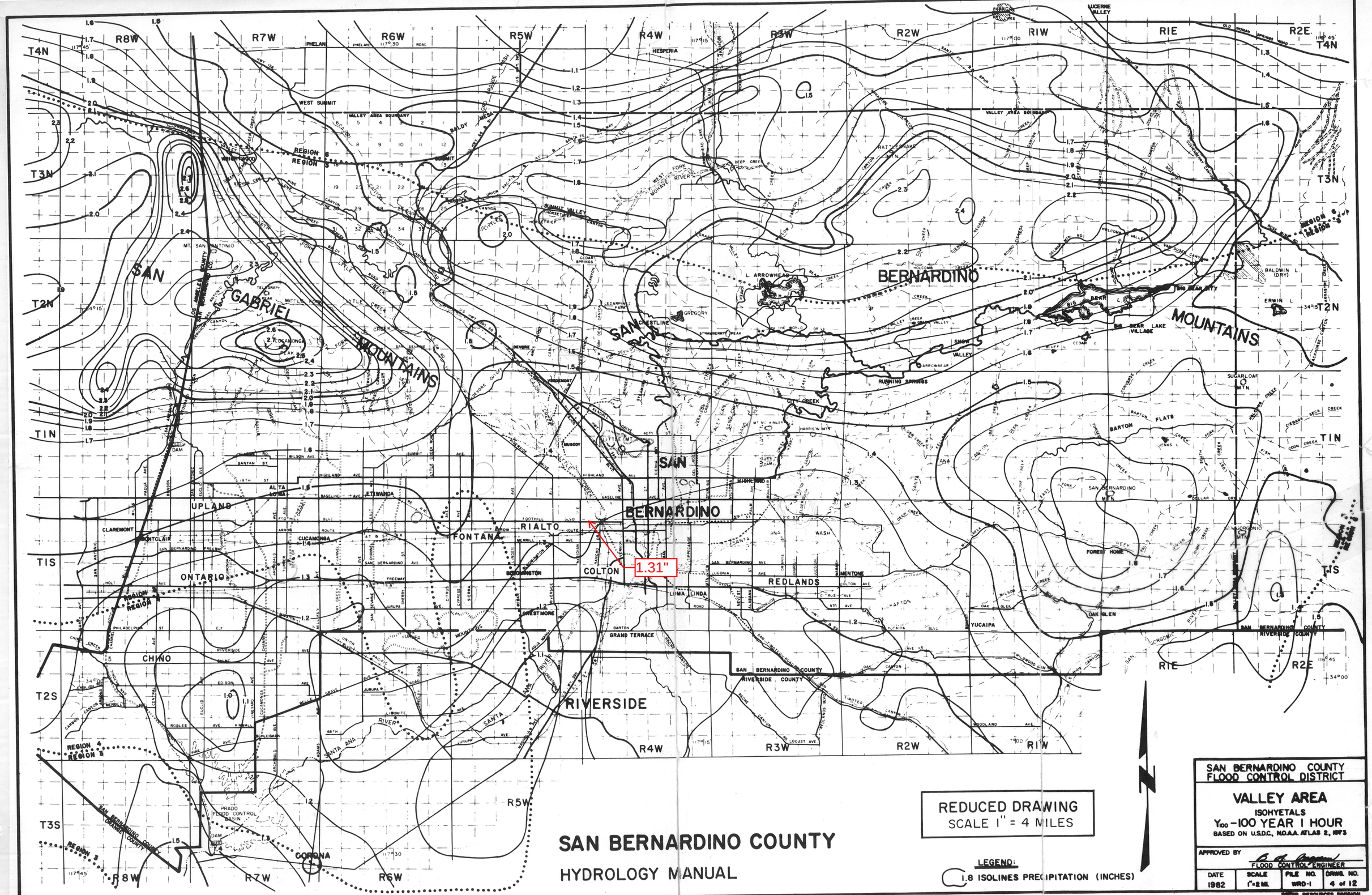
SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

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



SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

REDUCED DRAWING
SCALE 1" = 4 MILES

LEGEND:
1.8 ISOLINES PRECIPITATION (INCHES)

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

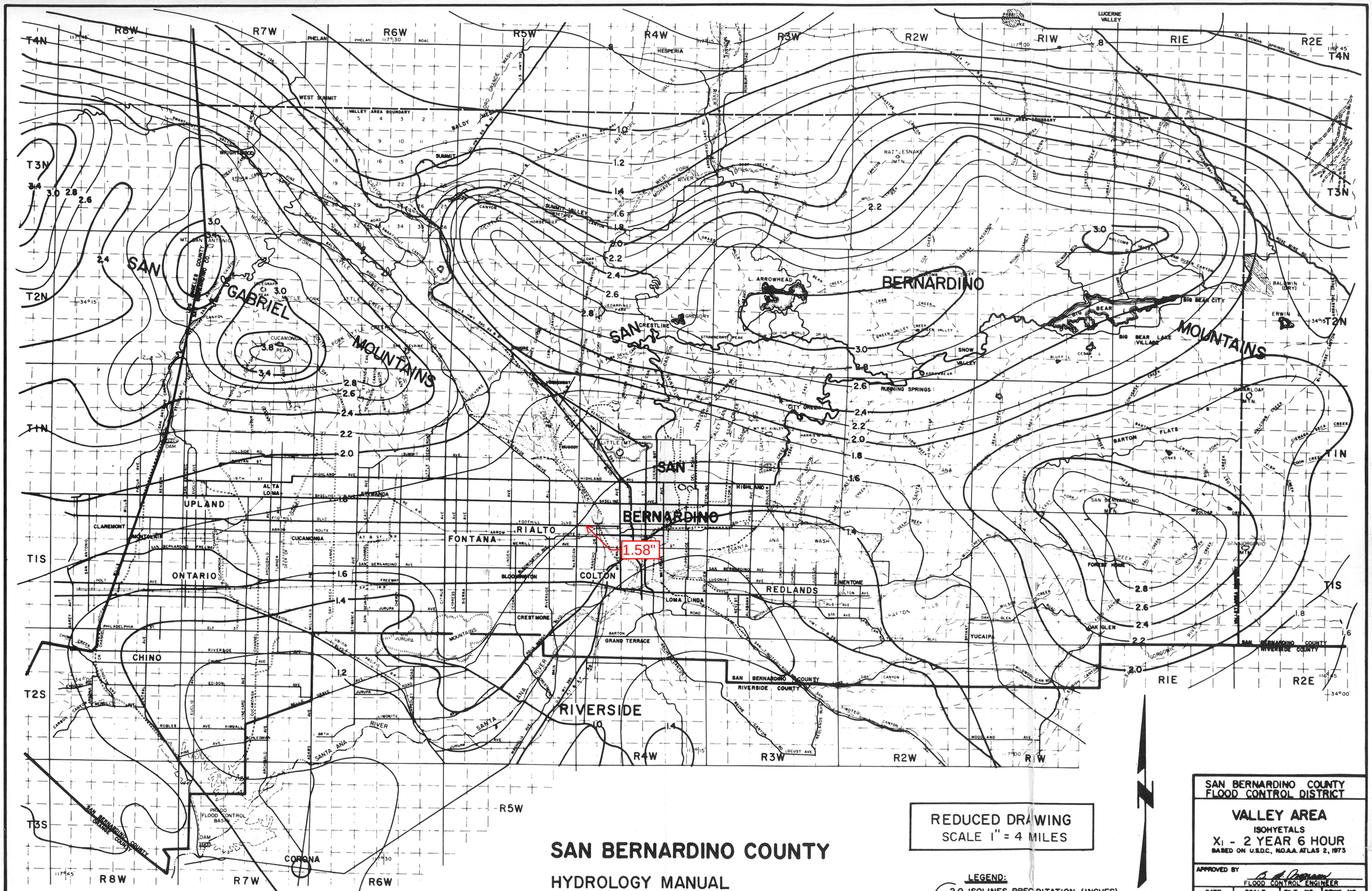
VALLEY AREA
ISOHYETALS
Y_{100} - 100 YEAR 1 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973

APPROVED BY _____ FLOOD CONTROL ENGINEER

DATE	SCALE	FILE NO.	DRWG. NO.
1982	1"=2 MI.	WRD-1	4 of 12

WATER RESOURCES DIVISION

FIGURE B-4



REDUCED DRAWING
SCALE 1" = 4 MILES

LEGEND:
2.0 ISOLINES PRECIPITATION (INCHES)

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

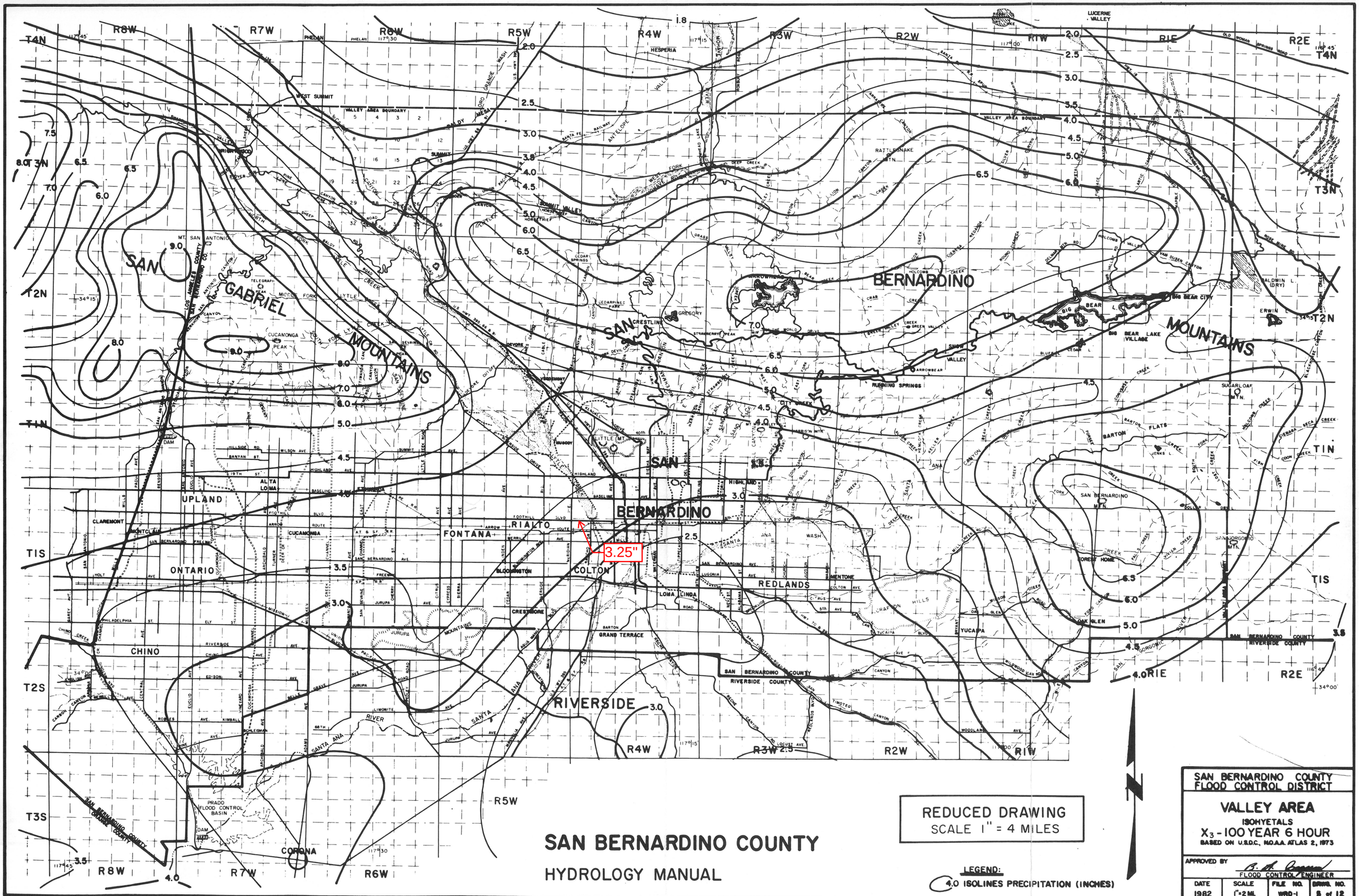
SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

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.	WRD-1	1 of 12

FIGURE B-1



B-13

FIGURE B-5

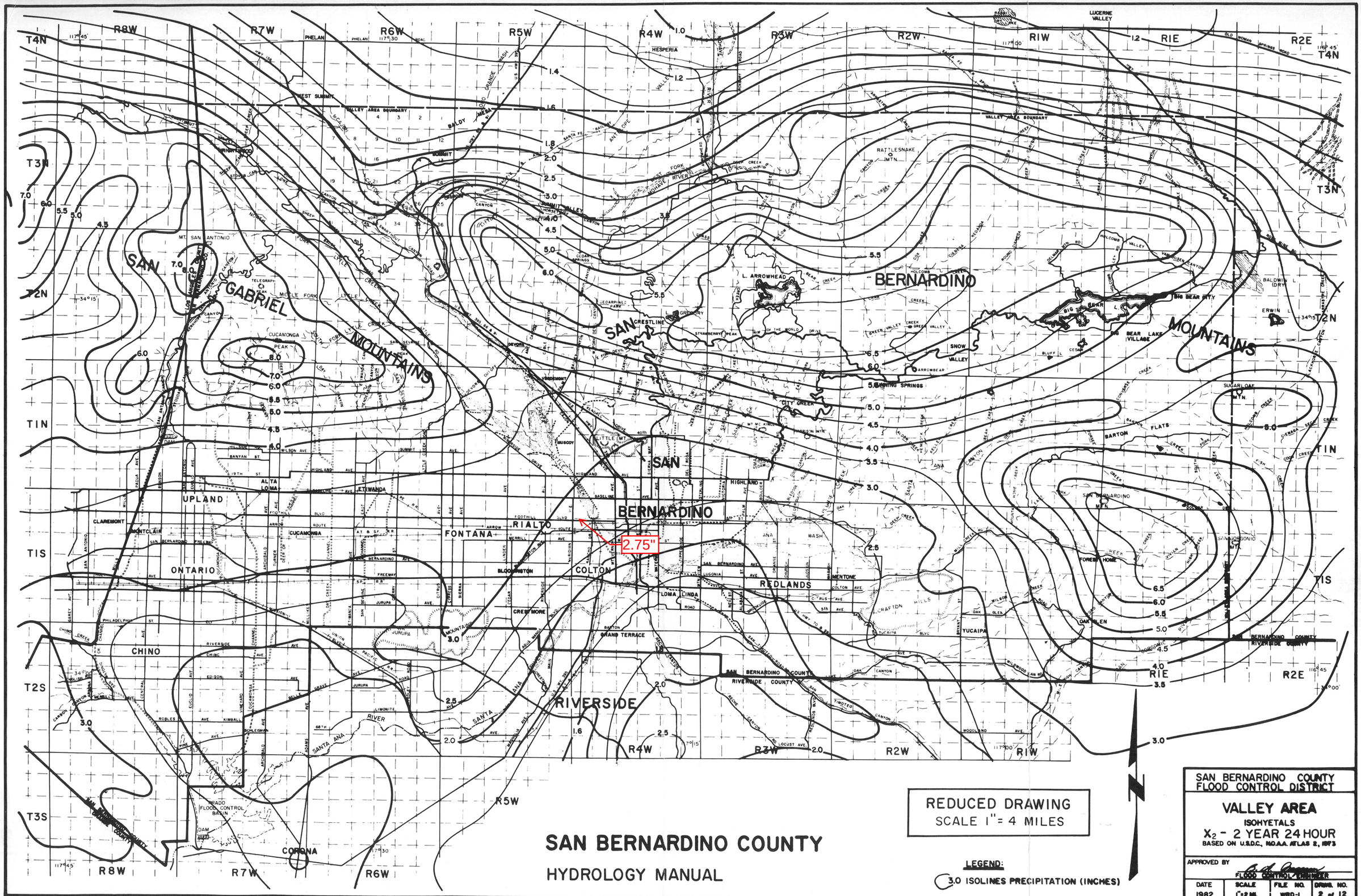

2.75"
SAN BERNARDINO COUNTY
HYDROLOGY MANUAL
REDUCED DRAWING
SCALE 1" = 4 MILES
LEGEND:
3.0 ISOLINES PRECIPITATION (INCHES)
SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT
VALLEY AREA
ISOHYETALS
X2 - 2 YEAR 24 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973
APPROVED BY
FLOOD CONTROL ENGINEER
DATE 1982
SCALE 1"=2 MI.
FILE NO. WRD-1
DRWG. NO. 2 of 12
WATER RESOURCES DIVISION

FIGURE B-2

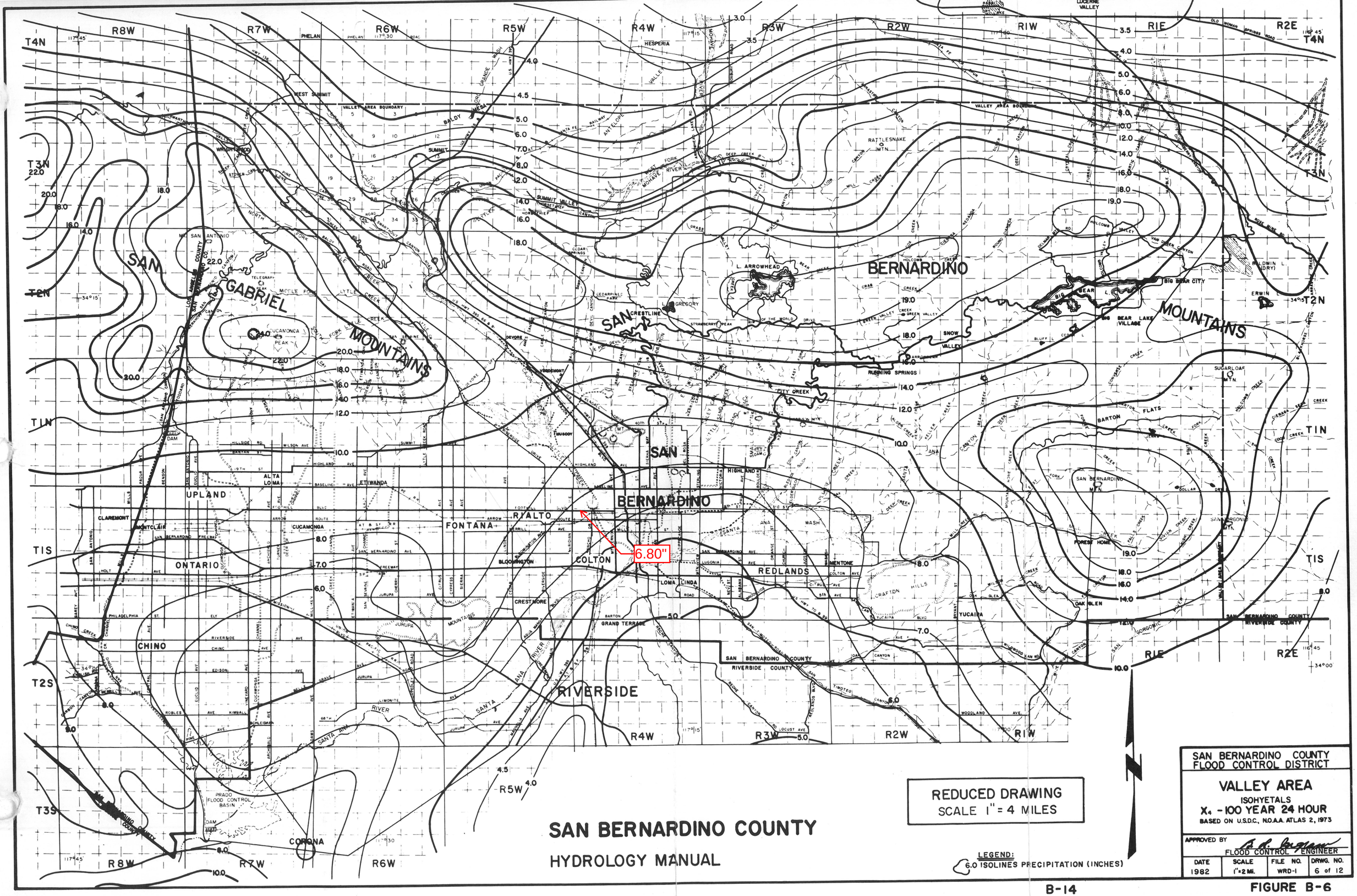

SAN GABRIEL MOUNTAINS
SAN BERNARDINO MOUNTAINS
SAN BERNARDINO
BERNARDINO
RIVERSIDE
UPLAND
ONTARIO
CHINO
RANCHO CUCAMONGA
FONTANA
RIALTO
COLTON
REDLANDS
LOMA LINDA
GRAND TERRACE
CRESTMORE
MENTONE
YUCAIPA
CALIMESA
CLAREMONT
MONTCLAIR
ALTA LOMA
ETIWANDA
CUCAMONGA
HESPERIA
VICTORVILLE
APPLE VALLEY
LUCERNE VALLEY
BIG BEAR CITY
BIG BEAR LAKE VILLAGE
RUNNING SPRINGS
CRESTLINE
LAKE ARROWHEAD
WRIGHTWOOD
PHELAN
WEST SUMMIT
SUMMIT VALLEY
VALLEY AREA BOUNDARY
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
6.80"
T4N
T3N
T2N
T1N
T1S
T2S
T3S
R8W
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
REDUCED DRAWING
SCALE 1" = 4 MILES
SAN BERNARDINO COUNTY
HYDROLOGY MANUAL
LEGEND:
6.0 ISOLINES PRECIPITATION (INCHES)
SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
VALLEY AREA
ISOHYETALS
X4 - 100 YEAR 24 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973
APPROVED BY
FLOOD CONTROL ENGINEER
DATE 1982
SCALE 1"=2 MI.
FILE NO. WRD-1
DRWG. NO. 6 of 12

FIGURE B-6

EXHIBIT “E”

San Bernardino County
Hydrology Manual
Soils Maps

Residential Landscaping (Lawn, Shrubs, etc.) - The pervious portions of commercial establishments, single and multiple family dwellings, trailer parks and schools where the predominant land cover is lawn, shrubbery and trees.

Row Crops - Lettuce, tomatoes, beets, tulips or any field crop planted in rows far enough apart that most of the soil surface is exposed to rainfall impact throughout the growing season. At plowing, planting and harvest times it is equivalent to fallow.

Small Grain - Wheat, oats, barley, flax, etc. planted in rows close enough that the soil surface is not exposed except during planting and shortly thereafter.

Legumes - Alfalfa, sweetclover, timothy, etc. and combinations are either planted in close rows or broadcast.

Fallow - Fallow land is land plowed but not yet seeded or tilled.

Woodland - grass - Areas with an open cover of broadleaf or coniferous trees usually live oak and pines, with the intervening ground space occupied by annual grasses or weeds. The trees may occur singly or in small clumps. Canopy density, the amount of ground surface shaded at high noon, is from 20 to 50 percent.

Woodland - Areas on which coniferous or broadleaf trees predominate. The canopy density is at least 50 percent. Open areas may have a cover of annual or perennial grasses or of brush. Herbaceous plant cover under the trees is usually sparse because of leaf or needle litter accumulation.

Chaparral - Land on which the principal vegetation consists of evergreen shrubs with broad, hard, stiff leaves such as manzonita, ceanothus and scrub oak. The brush cover is usually dense or moderately dense. Diffusely branched evergreen shrubs with fine needle-like leaves, such as chamise and redchank, with dense high growth are also included in this soil cover.

Annual Grass - Land on which the principal vegetation consists of annual grasses and weeds such as annual bromes, wild barley, soft chess, ryegrass and filaree.

Irrigated Pasture - Irrigated land planted to perennial grasses and legumes for production of forage and which is cultivated only to establish or renew the stand of plants. Dry land pasture is considered as annual grass.

Meadow - Land areas with seasonally high water table, locally called cienegas. Principal vegetation consists of sod-forming grasses interspersed with other plants.

Orchard (Deciduous) - Land planted to such deciduous trees as apples, apricots, pears, walnuts, and almonds.

Orchard (Evergreen) - Land planted to evergreen trees which include citrus and avocados and coniferous plantings.

Turf - Golf courses, parks and similar lands where the predominant cover is irrigated mowed close-grown turf grass. Parks in which trees are dense may be classified as woodland.

POOR: Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.

FAIR: Moderate cover with 50 percent to 75 percent of the ground surface protected by vegetation.

GOOD: Heavy or dense cover with more than 75 percent of the ground surface protected by vegetation.

In most cases, watershed existing conditions cover type and quality can be readily determined by a field review of a watershed. In ultimate planned open spaces, the soil cover condition shall be considered as "good." Figure C-3 provides the CN values for various types and quality of ground cover. Impervious areas shall be assigned a CN of 98. It is noted that for ultimately developed conditions, the CN for urban landscaping (turf) is provided in Figure C-3.

C.4. WATERSHED DEVELOPMENT CONDITIONS

Ultimate development of the watershed should normally be assumed since watershed urbanization is reasonably likely within the expected life of most hydraulic facilities. Long range master plans for the County and incorporated cities should be reviewed to insure that reasonable land use assumptions are made for the ultimate development of the watershed. A field review shall also be made to confirm existing use and drainage patterns. Particular attention shall be paid to existing and proposed landscape practices, as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. Appropriate actual impervious percentages can then be selected from Figure C-4. It should be noted that the recommended values from these figures are for average conditions and, therefore, some adjustment for particular applications may be required.

Runoff Index Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	71	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent.)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	25	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL COVERS -					
Fallow (Land plowed but not tilled or seeded)		77	86	91	94

CURVE NUMBERS FOR PERVIOUS AREAS

SAN BERNARDINO COUNTY HYDROLOGY MANUAL

FIGURE C-3 (1 OF 2)

Runoff Index Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
AGRICULTURAL COVERS (Continued)					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87

Notes:

1. All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.
2. Quality of cover definitions:

   Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.

   Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.

   Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
3. See Figure C-2 for definition of cover types.

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

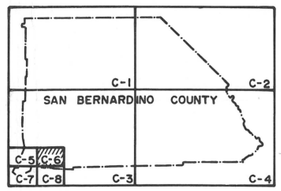
NUMBERS FOR PERVIOUS AREAS

FIGURE C-3 (2 OF 2)

SOURCE: GEOLOGY MAP

SOIL
TYPE A 50%
TYPE B 50%

SOURCE: GEOLOGY MAP
SOURCE: 1971 SCS SURVEY



INDEX MAP

LEGEND

SOIL GROUP BOUNDARY

A — SOIL GROUP DESIGNATION

BOUNDARY OF INDICATED SOURCE

CONTOUR INTERVAL 40 FEET
SCALE 1:48,000

SCALE REDUCED BY 1/2

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

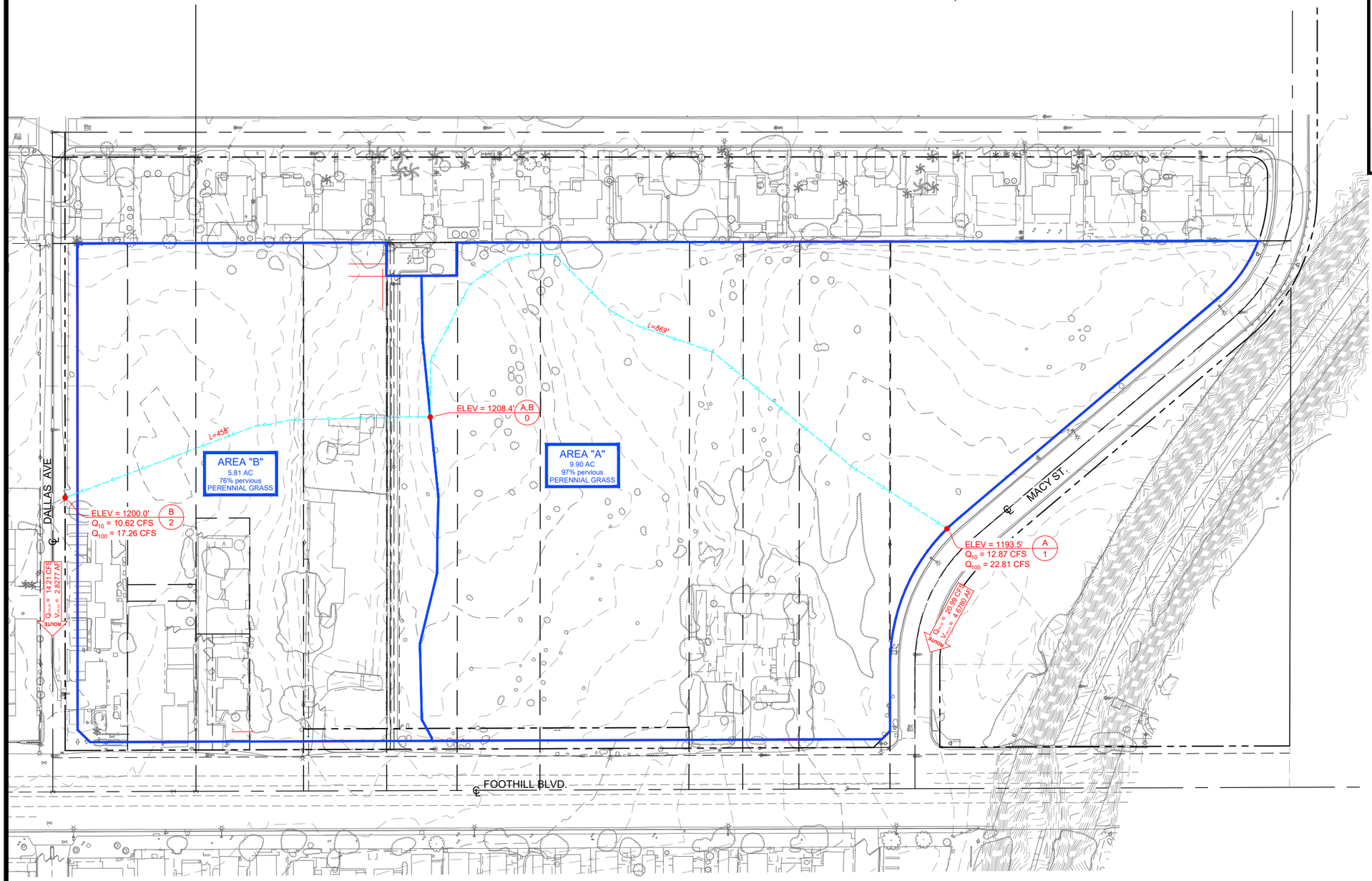
HYDROLOGIC SOILS GROUP MAP FOR SOUTHWEST-B AREA

FIGURE C-6

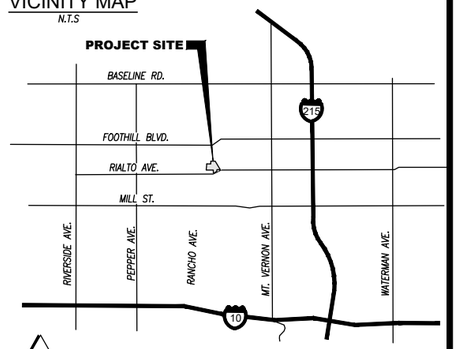
EXHIBIT “F”

Existing Hydrologic Conditions
Study Map

EXHIBIT "F"
EXISTING CONDITION EXHIBIT
ROUTE 66 TRUCK TERMINAL LLC
IN THE CITY OF SAN BERNARDINO, CA



VICINITY MAP
N.T.S



CITY OF SAN BERNARDINO

MAP LEGEND

UNIT HYDROGRAPH METHOD TOTAL PEAK $Q_{100\text{-}24}$ → ROUTE $Q_{100\text{-}24}$ = X CFS, $V_{100\text{-}24}$ = X AF

DRAINAGE AREA, SIZE, % IMPERVIOUS, & CLOSEST APPROXIMATED CLASSIFICATION → AREA "A" 1.00 AC 20% IMP 1 AC LOTS

RATIONAL METHOD NODE LOCATION, ELEVATION, & TOTAL PEAK $Q_{100\text{-}1}$ → A 1 ELEV = 100.00 Q_{100} = 1.0CFS

DRAINAGE AREA LIMITS

FLOW PATHS

60 0 60 120 180
SCALE: 1"=60'

REDUCED

EXISTING OFF-SITE TRIBUTARY
ROUTE 66 TRUCK TERMINAL LLC
IN THE CITY OF SAN BERNARDINO, CA

PREPARED BY: BONADIMAN — CIVILDESIGN

PREPARED FOR:

BY	MARK	REVISION DESCRIPTION	DATE

PREPARED FOR:	ROUTE 66 - RESIDENTIAL PROJECT
JOB NO:	235132
PREPARED BY:	JTS
CHECKED BY:	JTS

NOTE: JOSEPH E. BONADIMAN & ASSOCIATES, INC. DOES NOT WARRANTY THE ACCURACY OF THE G.I.S. DATA PRESENTED IN THIS EXHIBIT. THIS EXHIBIT MAY CONTAIN INFORMATION COPYRIGHTED TO THE COUNTY OF SAN BERNARDINO,CA.

EXISTING OFF-SITE TRIBUTARY
ROUTE 66 - RESIDENTIAL PROJECT
IN THE CITY OF SAN BERNARDINO, CA

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 04-16-24

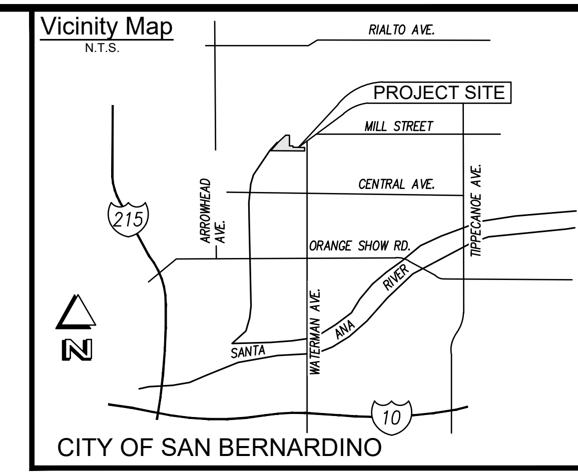
F

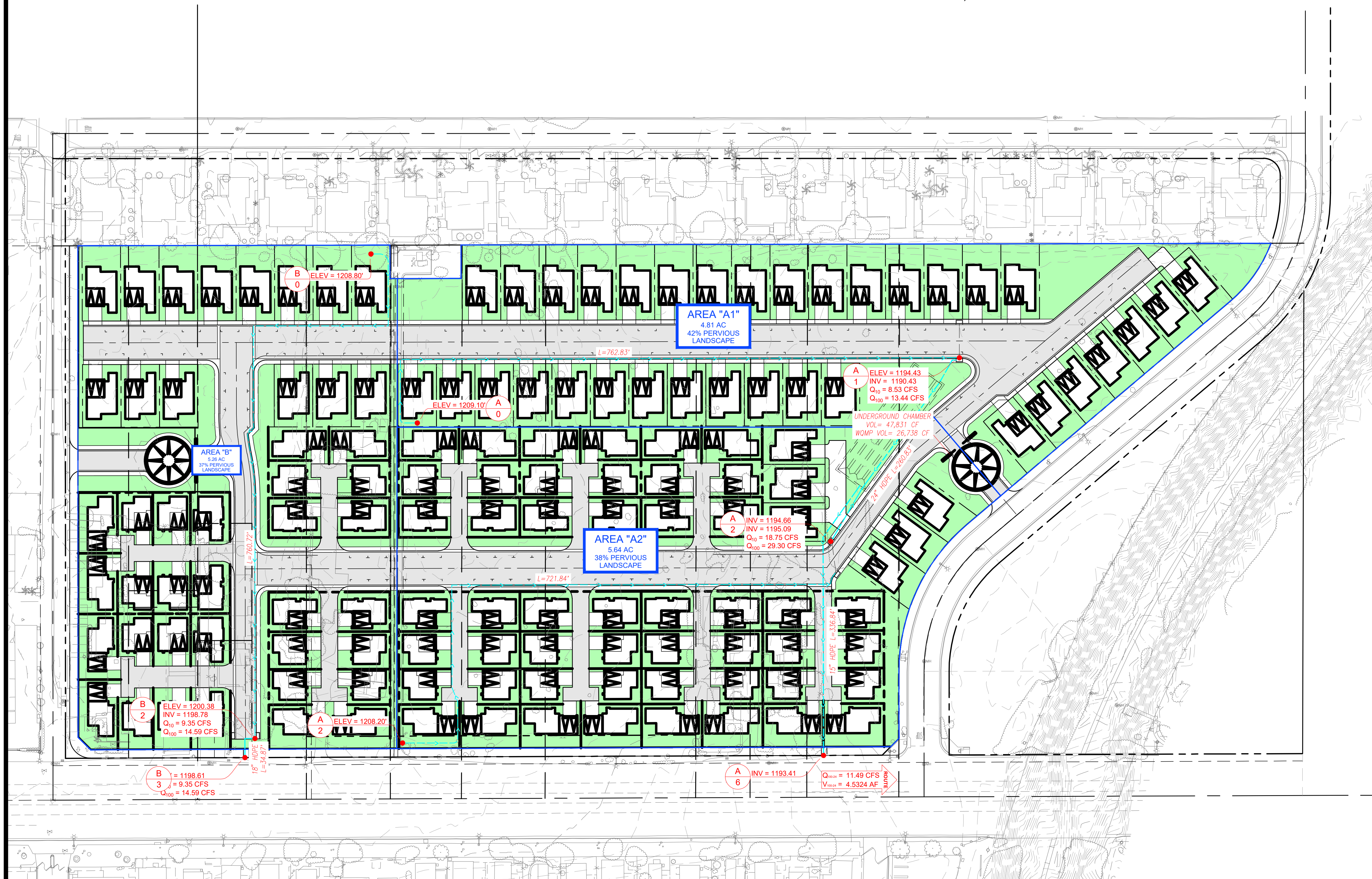
SHEET 1 OF 1

EXHIBIT “G”

Developed Hydrologic Conditions
Study Map (On-Site)

EXHIBIT "G"
DEVELOPED CONDITION EXHIBIT
ROUTE 66 TRUCK TERMINAL LLC
IN THE CITY OF SAN BERNARDINO, CA





MAP LEGEND

UNIT HYDROGRAPH METHOD TOTAL PEAK Q_{100-24} — Q_{100-24} = X CFS, V_{100-24} = X AF (ROUTE)

DRAINAGE AREA, SIZE, % IMPERVIOUS, & CLOSEST APPROXIMATED CLASSIFICATION — AREA "A" 1.00 AC 20% IMP 1 AC LOTS

RATIONAL METHOD NODE LOCATION, ELEVATION, & TOTAL PEAK Q_{100-1} — A 1 ELEV = 100.00 Q_{100} = 1.0CFS

DRAINAGE AREA LIMITS

FLOW PATHS

50 0 50 100 150
SCALE: 1"=50'

REDUCED

PROPOSED CONDITION EXHIBIT ROUTE 66 TRUCK TERMINAL LLC IN THE CITY OF SAN BERNARDINO, CA	PREPARED BY: BONADIAMAN JOSEPH E. BONADIMAN & ASSOCIATES, INC. ENGINEERING • G.I.S. • SURVEYING • PLANNING TEL. (909) 885-3806 234 NORTH ARROWHEAD AVE. SAN BERNARDINO, CA 92408 FAX (909) 381-1721 www.bonadiman.com CIVILDESIGN	PREPARED FOR:

BY	MARK	REVISION DESCRIPTION	DATE

PREPARED FOR:	ROUTE 66 - RESIDENTIAL PROJECT
JOB NO:	235132
PREPARED BY:	JTS
CHECKED BY:	JTS

NOTE: JOSEPH E. BONADIMAN & ASSOCIATES, INC. DOES NOT WARRANTY THE ACCURACY OF THE G.I.S. DATA PRESENTED IN THIS EXHIBIT. THIS EXHIBIT MAY CONTAIN INFORMATION COPYRIGHTED TO THE COUNTY OF SAN BERNARDINO,CA.

DEVELOPED CONDITION EXHIBIT
ROUTE 66 - RESIDENTIAL PROJECT
IN THE CITY OF SAN BERNARDINO, CA

DISREGARD PRINTS BEARING EARLIER REVISION DATES — 04-17-24

G

SHEET 1 OF 1

ATTACHMENT 1

Existing Conditions
Rational Method Calculations

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 04/15/24

204742 ROUTE 66 TRUCK TERMINAL
EXISTING CONDITIONS
10-YEAR, 1-HOUR STORM
BY: JTS DATE: 04-15-24

Program License Serial Number 6320

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

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.910 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 2

++
Process from Point/Station 0.000 to Point/Station 1.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 73.00
Pervious ratio(Ap) = 0.9700 Max loss rate(Fm)= 0.471(In/Hr)
Initial subarea data:
Initial area flow distance = 869.000(Ft.)
Top (of initial area) elevation = 1208.400(Ft.)
Bottom (of initial area) elevation = 1193.500(Ft.)
Difference in elevation = 14.900(Ft.)
Slope = 0.01715 s(%)= 1.71
TC = k(0.514)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.357 min.
Rainfall intensity = 1.915(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.679
Subarea runoff = 12.872(CFS)
Total initial stream area = 9.900(Ac.)
Pervious area fraction = 0.970
Initial area Fm value = 0.471(In/Hr)

++
Process from Point/Station 0.000 to Point/Station 2.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 73.00
Pervious ratio(Ap) = 0.7600 Max loss rate(Fm)= 0.369(In/Hr)
Initial subarea data:
Initial area flow distance = 458.000(Ft.)
Top (of initial area) elevation = 1208.400(Ft.)
Bottom (of initial area) elevation = 1200.000(Ft.)
Difference in elevation = 8.400(Ft.)
Slope = 0.01834 s(%)= 1.83
TC = k(0.462)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.919 min.
Rainfall intensity = 2.400(In/Hr) for a 10.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.762
Subarea runoff = 10.621(CFS)
Total initial stream area = 5.810(Ac.)
Pervious area fraction = 0.760
Initial area Fm value = 0.369(In/Hr)
End of computations, Total Study Area = 15.71 (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) = 0.892
Area averaged SCS curve number = 73.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 04/15/24

204742 ROUTE 66 TRUCK TERMINAL
EXISTING CONDITIONS
100-YEAR, 1-HOUR STORM
BY: FA DATE: 04-15-24

Program License Serial Number 6320

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

Rational hydrology study storm event year is 100.0
10 Year storm 1 hour rainfall = 0.910(In.)
100 Year storm 1 hour rainfall = 1.310(In.)
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.310 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 0.000 to Point/Station 1.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 73.00
Adjusted SCS curve number for AMC 3 = 89.40
Pervious ratio(Ap) = 0.9700 Max loss rate(Fm)= 0.197(In/Hr)
Initial subarea data:
Initial area flow distance = 869.000(Ft.)
Top (of initial area) elevation = 1208.400(Ft.)
Bottom (of initial area) elevation = 1193.500(Ft.)
Difference in elevation = 14.900(Ft.)
Slope = 0.01715 s(%)= 1.71
TC = k(0.514)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.357 min.
Rainfall intensity = 2.757(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.836
Subarea runoff = 22.809(CFS)
Total initial stream area = 9.900(Ac.)
Pervious area fraction = 0.970
Initial area Fm value = 0.197(In/Hr)

++
Process from Point/Station 0.000 to Point/Station 2.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 73.00
Adjusted SCS curve number for AMC 3 = 89.40
Pervious ratio(Ap) = 0.7600 Max loss rate(Fm)= 0.155(In/Hr)
Initial subarea data:
Initial area flow distance = 458.000(Ft.)
Top (of initial area) elevation = 1208.400(Ft.)
Bottom (of initial area) elevation = 1200.000(Ft.)
Difference in elevation = 8.400(Ft.)

Slope = 0.01834 s(%)= 1.83
TC = k(0.462)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.919 min.
Rainfall intensity = 3.455(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.860
Subarea runoff = 17.257(CFS)
Total initial stream area = 5.810(Ac.)
Pervious area fraction = 0.760
Initial area Fm value = 0.155(In/Hr)
End of computations, Total Study Area = 15.71 (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) = 0.892
Area averaged SCS curve number = 73.0

ATTACHMENT 2

Existing Conditions
Hydrograph Calculations

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

Study date 04/15/24

++

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

Program License Serial Number 6320

204742 ROUTE 66 TRUCK TERMINAL
EXISTING CONDITIONS AREA "A"
2-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-15-24

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 (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
9.90	1	0.91
Rainfall data for year 2		
9.90	6	1.58
Rainfall data for year 2		
9.90	24	2.75
Rainfall data for year 100		
9.90	1	1.31
Rainfall data for year 100		
9.90	6	3.25
Rainfall data for year 100		
9.90	24	6.80

++

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

SCS curve No.(AMCII)	SCS curve NO.(AMC 1)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
73.0	54.6	9.90	1.000	0.752	0.970	0.730

Area-averaged adjusted loss rate Fm (In/Hr) = 0.730

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

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
9.60	0.970	73.0	54.6	8.32	0.046
0.30	0.030	98.0	98.0	0.20	0.916

Area-averaged catchment yield fraction, Y = 0.072
Area-averaged low loss fraction, Yb = 0.928
User entry of time of concentration = 0.290 (hours)
++
Watershed area = 9.90(Ac.)
Catchment Lag time = 0.232 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.9195
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.730(In/Hr)
Average low loss rate fraction (Yb) = 0.928 (decimal)
VALLEY UNDEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.233(In)
Computed peak 30-minute rainfall = 0.478(In)
Specified peak 1-hour rainfall = 0.630(In)
Computed peak 3-hour rainfall = 1.107(In)
Specified peak 6-hour rainfall = 1.580(In)
Specified peak 24-hour rainfall = 2.750(In)

Rainfall depth area reduction factors:
Using a total area of 9.90(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.233(In)
30-minute factor = 1.000 Adjusted rainfall = 0.478(In)
1-hour factor = 1.000 Adjusted rainfall = 0.630(In)
3-hour factor = 1.000 Adjusted rainfall = 1.107(In)
6-hour factor = 1.000 Adjusted rainfall = 1.580(In)
24-hour factor = 1.000 Adjusted rainfall = 2.750(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 = 119.73 (CFS))	
1	3.719	4.453
2	18.479	17.671
3	42.496	28.755
4	61.763	23.068
5	71.755	11.963
6	77.545	6.932
7	81.822	5.122
8	85.173	4.012
9	87.792	3.136
10	89.955	2.590
11	91.695	2.083
12	93.114	1.700
13	94.260	1.371
14	95.346	1.301
15	96.258	1.092
16	97.015	0.905
17	97.662	0.775
18	98.200	0.645
19	98.644	0.532
20	99.004	0.431
21	99.364	0.430
22	99.723	0.430
23	100.000	0.332

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2332	0.2332
2	0.3077	0.0745
3	0.3619	0.0542
4	0.4060	0.0441
5	0.4440	0.0379
6	0.4775	0.0336
7	0.5079	0.0304
8	0.5358	0.0279
9	0.5616	0.0258
10	0.5858	0.0242
11	0.6086	0.0228
12	0.6301	0.0216
13	0.6565	0.0264
14	0.6820	0.0254
15	0.7066	0.0246
16	0.7304	0.0238
17	0.7534	0.0231
18	0.7759	0.0224
19	0.7977	0.0218
20	0.8190	0.0213
21	0.8397	0.0208
22	0.8600	0.0203
23	0.8799	0.0198
24	0.8993	0.0194
25	0.9183	0.0190
26	0.9370	0.0187
27	0.9553	0.0183
28	0.9733	0.0180
29	0.9910	0.0177
30	1.0084	0.0174
31	1.0255	0.0171
32	1.0424	0.0168
33	1.0589	0.0166
34	1.0753	0.0163
35	1.0914	0.0161
36	1.1073	0.0159
37	1.1230	0.0157
38	1.1384	0.0155
39	1.1537	0.0153
40	1.1688	0.0151
41	1.1837	0.0149
42	1.1984	0.0147
43	1.2129	0.0145
44	1.2273	0.0144
45	1.2415	0.0142
46	1.2556	0.0141
47	1.2695	0.0139
48	1.2833	0.0138
49	1.2970	0.0136
50	1.3105	0.0135
51	1.3239	0.0134
52	1.3371	0.0132
53	1.3502	0.0131
54	1.3632	0.0130
55	1.3761	0.0129
56	1.3889	0.0128
57	1.4016	0.0127
58	1.4141	0.0126
59	1.4266	0.0125
60	1.4389	0.0123
61	1.4512	0.0122
62	1.4633	0.0122
63	1.4754	0.0121
64	1.4873	0.0120
65	1.4992	0.0119
66	1.5110	0.0118
67	1.5227	0.0117

68	1.5343	0.0116
69	1.5458	0.0115
70	1.5573	0.0114
71	1.5687	0.0114
72	1.5800	0.0113
73	1.5887	0.0087
74	1.5974	0.0087
75	1.6059	0.0086
76	1.6145	0.0085
77	1.6229	0.0085
78	1.6313	0.0084
79	1.6397	0.0083
80	1.6479	0.0083
81	1.6561	0.0082
82	1.6643	0.0081
83	1.6724	0.0081
84	1.6804	0.0080
85	1.6883	0.0080
86	1.6963	0.0079
87	1.7041	0.0079
88	1.7119	0.0078
89	1.7197	0.0078
90	1.7274	0.0077
91	1.7350	0.0076
92	1.7426	0.0076
93	1.7502	0.0075
94	1.7577	0.0075
95	1.7651	0.0075
96	1.7725	0.0074
97	1.7799	0.0074
98	1.7872	0.0073
99	1.7945	0.0073
100	1.8017	0.0072
101	1.8089	0.0072
102	1.8160	0.0071
103	1.8231	0.0071
104	1.8302	0.0071
105	1.8372	0.0070
106	1.8441	0.0070
107	1.8511	0.0069
108	1.8580	0.0069
109	1.8648	0.0069
110	1.8717	0.0068
111	1.8784	0.0068
112	1.8852	0.0067
113	1.8919	0.0067
114	1.8986	0.0067
115	1.9052	0.0066
116	1.9118	0.0066
117	1.9184	0.0066
118	1.9249	0.0065
119	1.9314	0.0065
120	1.9379	0.0065
121	1.9443	0.0064
122	1.9507	0.0064
123	1.9571	0.0064
124	1.9635	0.0063
125	1.9698	0.0063
126	1.9761	0.0063
127	1.9823	0.0063
128	1.9885	0.0062
129	1.9947	0.0062
130	2.0009	0.0062
131	2.0071	0.0061
132	2.0132	0.0061
133	2.0192	0.0061
134	2.0253	0.0061
135	2.0313	0.0060
136	2.0373	0.0060

137	2.0433	0.0060
138	2.0493	0.0059
139	2.0552	0.0059
140	2.0611	0.0059
141	2.0670	0.0059
142	2.0728	0.0058
143	2.0786	0.0058
144	2.0844	0.0058
145	2.0902	0.0058
146	2.0959	0.0058
147	2.1017	0.0057
148	2.1074	0.0057
149	2.1131	0.0057
150	2.1187	0.0057
151	2.1244	0.0056
152	2.1300	0.0056
153	2.1356	0.0056
154	2.1411	0.0056
155	2.1467	0.0055
156	2.1522	0.0055
157	2.1577	0.0055
158	2.1632	0.0055
159	2.1686	0.0055
160	2.1741	0.0054
161	2.1795	0.0054
162	2.1849	0.0054
163	2.1903	0.0054
164	2.1957	0.0054
165	2.2010	0.0053
166	2.2063	0.0053
167	2.2116	0.0053
168	2.2169	0.0053
169	2.2222	0.0053
170	2.2274	0.0052
171	2.2327	0.0052
172	2.2379	0.0052
173	2.2431	0.0052
174	2.2482	0.0052
175	2.2534	0.0052
176	2.2585	0.0051
177	2.2636	0.0051
178	2.2688	0.0051
179	2.2738	0.0051
180	2.2789	0.0051
181	2.2840	0.0051
182	2.2890	0.0050
183	2.2940	0.0050
184	2.2990	0.0050
185	2.3040	0.0050
186	2.3090	0.0050
187	2.3139	0.0050
188	2.3189	0.0049
189	2.3238	0.0049
190	2.3287	0.0049
191	2.3336	0.0049
192	2.3385	0.0049
193	2.3433	0.0049
194	2.3482	0.0048
195	2.3530	0.0048
196	2.3578	0.0048
197	2.3626	0.0048
198	2.3674	0.0048
199	2.3722	0.0048
200	2.3769	0.0048
201	2.3817	0.0047
202	2.3864	0.0047
203	2.3911	0.0047
204	2.3958	0.0047
205	2.4005	0.0047

206	2.4052	0.0047
207	2.4099	0.0047
208	2.4145	0.0046
209	2.4191	0.0046
210	2.4238	0.0046
211	2.4284	0.0046
212	2.4330	0.0046
213	2.4375	0.0046
214	2.4421	0.0046
215	2.4467	0.0046
216	2.4512	0.0045
217	2.4557	0.0045
218	2.4603	0.0045
219	2.4648	0.0045
220	2.4693	0.0045
221	2.4737	0.0045
222	2.4782	0.0045
223	2.4827	0.0045
224	2.4871	0.0044
225	2.4915	0.0044
226	2.4960	0.0044
227	2.5004	0.0044
228	2.5048	0.0044
229	2.5092	0.0044
230	2.5135	0.0044
231	2.5179	0.0044
232	2.5222	0.0044
233	2.5266	0.0043
234	2.5309	0.0043
235	2.5352	0.0043
236	2.5395	0.0043
237	2.5438	0.0043
238	2.5481	0.0043
239	2.5524	0.0043
240	2.5567	0.0043
241	2.5609	0.0043
242	2.5652	0.0042
243	2.5694	0.0042
244	2.5736	0.0042
245	2.5778	0.0042
246	2.5820	0.0042
247	2.5862	0.0042
248	2.5904	0.0042
249	2.5946	0.0042
250	2.5987	0.0042
251	2.6029	0.0042
252	2.6070	0.0041
253	2.6111	0.0041
254	2.6153	0.0041
255	2.6194	0.0041
256	2.6235	0.0041
257	2.6276	0.0041
258	2.6317	0.0041
259	2.6357	0.0041
260	2.6398	0.0041
261	2.6438	0.0041
262	2.6479	0.0040
263	2.6519	0.0040
264	2.6560	0.0040
265	2.6600	0.0040
266	2.6640	0.0040
267	2.6680	0.0040
268	2.6720	0.0040
269	2.6760	0.0040
270	2.6799	0.0040
271	2.6839	0.0040
272	2.6878	0.0040
273	2.6918	0.0039
274	2.6957	0.0039

275	2.6997	0.0039
276	2.7036	0.0039
277	2.7075	0.0039
278	2.7114	0.0039
279	2.7153	0.0039
280	2.7192	0.0039
281	2.7230	0.0039
282	2.7269	0.0039
283	2.7308	0.0039
284	2.7346	0.0039
285	2.7385	0.0038
286	2.7423	0.0038
287	2.7461	0.0038
288	2.7500	0.0038

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0038	0.0035	0.0003
2	0.0038	0.0036	0.0003
3	0.0038	0.0036	0.0003
4	0.0039	0.0036	0.0003
5	0.0039	0.0036	0.0003
6	0.0039	0.0036	0.0003
7	0.0039	0.0036	0.0003
8	0.0039	0.0036	0.0003
9	0.0039	0.0036	0.0003
10	0.0039	0.0036	0.0003
11	0.0039	0.0037	0.0003
12	0.0040	0.0037	0.0003
13	0.0040	0.0037	0.0003
14	0.0040	0.0037	0.0003
15	0.0040	0.0037	0.0003
16	0.0040	0.0037	0.0003
17	0.0040	0.0037	0.0003
18	0.0040	0.0037	0.0003
19	0.0041	0.0038	0.0003
20	0.0041	0.0038	0.0003
21	0.0041	0.0038	0.0003
22	0.0041	0.0038	0.0003
23	0.0041	0.0038	0.0003
24	0.0041	0.0038	0.0003
25	0.0041	0.0038	0.0003
26	0.0042	0.0039	0.0003
27	0.0042	0.0039	0.0003
28	0.0042	0.0039	0.0003
29	0.0042	0.0039	0.0003
30	0.0042	0.0039	0.0003
31	0.0042	0.0039	0.0003
32	0.0042	0.0039	0.0003
33	0.0043	0.0040	0.0003
34	0.0043	0.0040	0.0003
35	0.0043	0.0040	0.0003
36	0.0043	0.0040	0.0003
37	0.0043	0.0040	0.0003
38	0.0043	0.0040	0.0003
39	0.0044	0.0040	0.0003
40	0.0044	0.0041	0.0003
41	0.0044	0.0041	0.0003
42	0.0044	0.0041	0.0003
43	0.0044	0.0041	0.0003
44	0.0044	0.0041	0.0003
45	0.0045	0.0041	0.0003
46	0.0045	0.0042	0.0003
47	0.0045	0.0042	0.0003
48	0.0045	0.0042	0.0003
49	0.0045	0.0042	0.0003
50	0.0046	0.0042	0.0003

51	0.0046	0.0043	0.0003
52	0.0046	0.0043	0.0003
53	0.0046	0.0043	0.0003
54	0.0046	0.0043	0.0003
55	0.0047	0.0043	0.0003
56	0.0047	0.0043	0.0003
57	0.0047	0.0044	0.0003
58	0.0047	0.0044	0.0003
59	0.0047	0.0044	0.0003
60	0.0048	0.0044	0.0003
61	0.0048	0.0044	0.0003
62	0.0048	0.0045	0.0003
63	0.0048	0.0045	0.0003
64	0.0048	0.0045	0.0003
65	0.0049	0.0045	0.0004
66	0.0049	0.0045	0.0004
67	0.0049	0.0046	0.0004
68	0.0049	0.0046	0.0004
69	0.0050	0.0046	0.0004
70	0.0050	0.0046	0.0004
71	0.0050	0.0047	0.0004
72	0.0050	0.0047	0.0004
73	0.0051	0.0047	0.0004
74	0.0051	0.0047	0.0004
75	0.0051	0.0048	0.0004
76	0.0051	0.0048	0.0004
77	0.0052	0.0048	0.0004
78	0.0052	0.0048	0.0004
79	0.0052	0.0049	0.0004
80	0.0052	0.0049	0.0004
81	0.0053	0.0049	0.0004
82	0.0053	0.0049	0.0004
83	0.0053	0.0050	0.0004
84	0.0054	0.0050	0.0004
85	0.0054	0.0050	0.0004
86	0.0054	0.0050	0.0004
87	0.0055	0.0051	0.0004
88	0.0055	0.0051	0.0004
89	0.0055	0.0051	0.0004
90	0.0055	0.0051	0.0004
91	0.0056	0.0052	0.0004
92	0.0056	0.0052	0.0004
93	0.0057	0.0053	0.0004
94	0.0057	0.0053	0.0004
95	0.0057	0.0053	0.0004
96	0.0058	0.0053	0.0004
97	0.0058	0.0054	0.0004
98	0.0058	0.0054	0.0004
99	0.0059	0.0055	0.0004
100	0.0059	0.0055	0.0004
101	0.0059	0.0055	0.0004
102	0.0060	0.0055	0.0004
103	0.0060	0.0056	0.0004
104	0.0061	0.0056	0.0004
105	0.0061	0.0057	0.0004
106	0.0061	0.0057	0.0004
107	0.0062	0.0058	0.0004
108	0.0062	0.0058	0.0004
109	0.0063	0.0058	0.0005
110	0.0063	0.0059	0.0005
111	0.0064	0.0059	0.0005
112	0.0064	0.0059	0.0005
113	0.0065	0.0060	0.0005
114	0.0065	0.0060	0.0005
115	0.0066	0.0061	0.0005
116	0.0066	0.0061	0.0005
117	0.0067	0.0062	0.0005
118	0.0067	0.0062	0.0005
119	0.0068	0.0063	0.0005

120	0.0068	0.0063	0.0005
121	0.0069	0.0064	0.0005
122	0.0069	0.0064	0.0005
123	0.0070	0.0065	0.0005
124	0.0071	0.0065	0.0005
125	0.0071	0.0066	0.0005
126	0.0072	0.0067	0.0005
127	0.0073	0.0067	0.0005
128	0.0073	0.0068	0.0005
129	0.0074	0.0069	0.0005
130	0.0075	0.0069	0.0005
131	0.0075	0.0070	0.0005
132	0.0076	0.0071	0.0005
133	0.0077	0.0071	0.0006
134	0.0078	0.0072	0.0006
135	0.0079	0.0073	0.0006
136	0.0079	0.0073	0.0006
137	0.0080	0.0074	0.0006
138	0.0081	0.0075	0.0006
139	0.0082	0.0076	0.0006
140	0.0083	0.0077	0.0006
141	0.0084	0.0078	0.0006
142	0.0085	0.0079	0.0006
143	0.0086	0.0080	0.0006
144	0.0087	0.0080	0.0006
145	0.0113	0.0105	0.0008
146	0.0114	0.0106	0.0008
147	0.0115	0.0107	0.0008
148	0.0116	0.0108	0.0008
149	0.0118	0.0109	0.0008
150	0.0119	0.0110	0.0009
151	0.0121	0.0112	0.0009
152	0.0122	0.0113	0.0009
153	0.0123	0.0115	0.0009
154	0.0125	0.0116	0.0009
155	0.0127	0.0118	0.0009
156	0.0128	0.0119	0.0009
157	0.0130	0.0121	0.0009
158	0.0131	0.0122	0.0009
159	0.0134	0.0124	0.0010
160	0.0135	0.0125	0.0010
161	0.0138	0.0128	0.0010
162	0.0139	0.0129	0.0010
163	0.0142	0.0132	0.0010
164	0.0144	0.0134	0.0010
165	0.0147	0.0137	0.0011
166	0.0149	0.0138	0.0011
167	0.0153	0.0142	0.0011
168	0.0155	0.0144	0.0011
169	0.0159	0.0148	0.0011
170	0.0161	0.0150	0.0012
171	0.0166	0.0154	0.0012
172	0.0168	0.0156	0.0012
173	0.0174	0.0161	0.0012
174	0.0177	0.0164	0.0013
175	0.0183	0.0170	0.0013
176	0.0187	0.0173	0.0013
177	0.0194	0.0180	0.0014
178	0.0198	0.0184	0.0014
179	0.0208	0.0193	0.0015
180	0.0213	0.0197	0.0015
181	0.0224	0.0208	0.0016
182	0.0231	0.0214	0.0017
183	0.0246	0.0228	0.0018
184	0.0254	0.0236	0.0018
185	0.0216	0.0200	0.0015
186	0.0228	0.0211	0.0016
187	0.0258	0.0240	0.0019
188	0.0279	0.0259	0.0020

189	0.0336	0.0312	0.0024
190	0.0379	0.0352	0.0027
191	0.0542	0.0503	0.0039
192	0.0745	0.0608	0.0137
193	0.2332	0.0608	0.1724
194	0.0441	0.0410	0.0032
195	0.0304	0.0282	0.0022
196	0.0242	0.0224	0.0017
197	0.0264	0.0245	0.0019
198	0.0238	0.0221	0.0017
199	0.0218	0.0203	0.0016
200	0.0203	0.0188	0.0015
201	0.0190	0.0177	0.0014
202	0.0180	0.0167	0.0013
203	0.0171	0.0159	0.0012
204	0.0163	0.0152	0.0012
205	0.0157	0.0145	0.0011
206	0.0151	0.0140	0.0011
207	0.0145	0.0135	0.0010
208	0.0141	0.0131	0.0010
209	0.0136	0.0127	0.0010
210	0.0132	0.0123	0.0010
211	0.0129	0.0120	0.0009
212	0.0126	0.0117	0.0009
213	0.0122	0.0114	0.0009
214	0.0120	0.0111	0.0009
215	0.0117	0.0109	0.0008
216	0.0114	0.0106	0.0008
217	0.0087	0.0081	0.0006
218	0.0085	0.0079	0.0006
219	0.0083	0.0077	0.0006
220	0.0081	0.0076	0.0006
221	0.0080	0.0074	0.0006
222	0.0078	0.0072	0.0006
223	0.0076	0.0071	0.0005
224	0.0075	0.0070	0.0005
225	0.0074	0.0068	0.0005
226	0.0072	0.0067	0.0005
227	0.0071	0.0066	0.0005
228	0.0070	0.0065	0.0005
229	0.0069	0.0064	0.0005
230	0.0067	0.0063	0.0005
231	0.0066	0.0062	0.0005
232	0.0065	0.0061	0.0005
233	0.0064	0.0060	0.0005
234	0.0063	0.0059	0.0005
235	0.0063	0.0058	0.0004
236	0.0062	0.0057	0.0004
237	0.0061	0.0056	0.0004
238	0.0060	0.0056	0.0004
239	0.0059	0.0055	0.0004
240	0.0058	0.0054	0.0004
241	0.0058	0.0054	0.0004
242	0.0057	0.0053	0.0004
243	0.0056	0.0052	0.0004
244	0.0056	0.0052	0.0004
245	0.0055	0.0051	0.0004
246	0.0054	0.0051	0.0004
247	0.0054	0.0050	0.0004
248	0.0053	0.0049	0.0004
249	0.0053	0.0049	0.0004
250	0.0052	0.0048	0.0004
251	0.0052	0.0048	0.0004
252	0.0051	0.0047	0.0004
253	0.0051	0.0047	0.0004
254	0.0050	0.0046	0.0004
255	0.0050	0.0046	0.0004
256	0.0049	0.0046	0.0004
257	0.0049	0.0045	0.0003

258	0.0048	0.0045	0.0003
259	0.0048	0.0044	0.0003
260	0.0047	0.0044	0.0003
261	0.0047	0.0044	0.0003
262	0.0046	0.0043	0.0003
263	0.0046	0.0043	0.0003
264	0.0046	0.0042	0.0003
265	0.0045	0.0042	0.0003
266	0.0045	0.0042	0.0003
267	0.0045	0.0041	0.0003
268	0.0044	0.0041	0.0003
269	0.0044	0.0041	0.0003
270	0.0044	0.0040	0.0003
271	0.0043	0.0040	0.0003
272	0.0043	0.0040	0.0003
273	0.0043	0.0039	0.0003
274	0.0042	0.0039	0.0003
275	0.0042	0.0039	0.0003
276	0.0042	0.0039	0.0003
277	0.0041	0.0038	0.0003
278	0.0041	0.0038	0.0003
279	0.0041	0.0038	0.0003
280	0.0040	0.0038	0.0003
281	0.0040	0.0037	0.0003
282	0.0040	0.0037	0.0003
283	0.0040	0.0037	0.0003
284	0.0039	0.0037	0.0003
285	0.0039	0.0036	0.0003
286	0.0039	0.0036	0.0003
287	0.0039	0.0036	0.0003
288	0.0038	0.0036	0.0003

Total soil rain loss = 2.39(In)
Total effective rainfall = 0.36(In)
Peak flow rate in flood hydrograph = 5.45(CFS)

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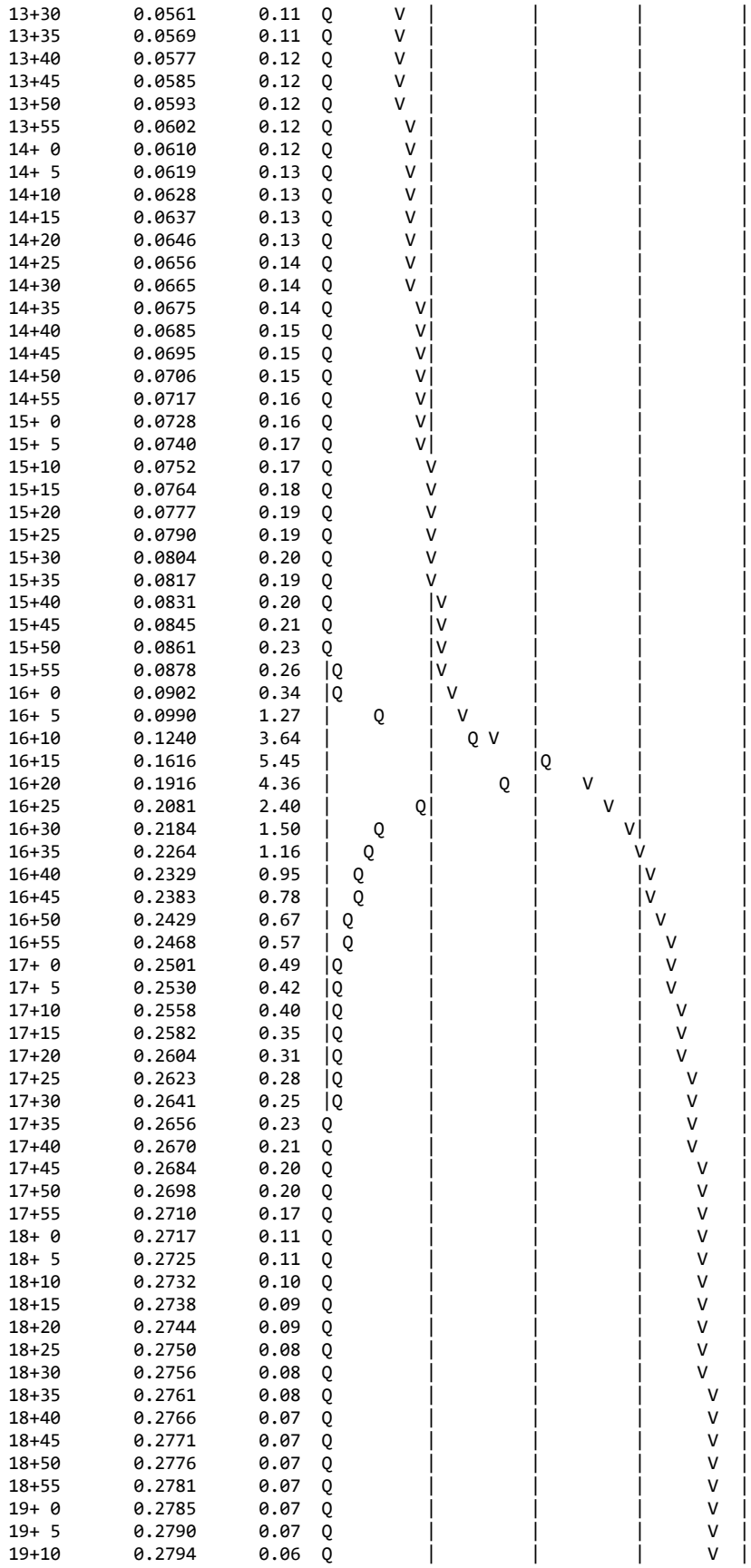
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q	|	|	|	|
0+10	0.0001	0.01	Q	|	|	|	|
0+15	0.0001	0.01	Q	|	|	|	|
0+20	0.0003	0.02	Q	|	|	|	|
0+25	0.0004	0.02	Q	|	|	|	|
0+30	0.0006	0.03	Q	|	|	|	|
0+35	0.0008	0.03	Q	|	|	|	|
0+40	0.0010	0.03	Q	|	|	|	|
0+45	0.0012	0.03	Q	|	|	|	|
0+50	0.0014	0.03	Q	|	|	|	|
0+55	0.0016	0.03	Q	|	|	|	|
1+ 0	0.0018	0.03	Q	|	|	|	|
1+ 5	0.0021	0.03	Q	|	|	|	|
1+10	0.0023	0.03	Q	|	|	|	|
1+15	0.0025	0.03	Q	|	|	|	|
1+20	0.0027	0.03	Q	|	|	|	|
1+25	0.0030	0.03	Q	|	|	|	|
1+30	0.0032	0.03	Q	|	|	|	|
1+35	0.0034	0.03	Q	|	|	|	|
1+40	0.0037	0.03	Q	|	|	|	|
1+45	0.0039	0.03	Q	|	|	|	|
1+50	0.0041	0.03	Q	|	|	|	|
1+55	0.0044	0.03	Q	|	|	|	|

2+ 0	0.0046	0.03	Q	|	|	|	|
2+ 5	0.0049	0.04	Q	|	|	|	|
2+10	0.0051	0.04	Q	|	|	|	|
2+15	0.0054	0.04	Q	|	|	|	|
2+20	0.0056	0.04	Q	|	|	|	|
2+25	0.0058	0.04	Q	|	|	|	|
2+30	0.0061	0.04	Q	|	|	|	|
2+35	0.0063	0.04	Q	|	|	|	|
2+40	0.0066	0.04	Q	|	|	|	|
2+45	0.0068	0.04	Q	|	|	|	|
2+50	0.0071	0.04	Q	|	|	|	|
2+55	0.0073	0.04	Q	|	|	|	|
3+ 0	0.0076	0.04	QV	|	|	|	|
3+ 5	0.0078	0.04	QV	|	|	|	|
3+10	0.0081	0.04	QV	|	|	|	|
3+15	0.0083	0.04	QV	|	|	|	|
3+20	0.0086	0.04	QV	|	|	|	|
3+25	0.0089	0.04	QV	|	|	|	|
3+30	0.0091	0.04	QV	|	|	|	|
3+35	0.0094	0.04	QV	|	|	|	|
3+40	0.0096	0.04	QV	|	|	|	|
3+45	0.0099	0.04	QV	|	|	|	|
3+50	0.0101	0.04	QV	|	|	|	|
3+55	0.0104	0.04	QV	|	|	|	|
4+ 0	0.0107	0.04	QV	|	|	|	|
4+ 5	0.0109	0.04	QV	|	|	|	|
4+10	0.0112	0.04	QV	|	|	|	|
4+15	0.0115	0.04	QV	|	|	|	|
4+20	0.0117	0.04	QV	|	|	|	|
4+25	0.0120	0.04	QV	|	|	|	|
4+30	0.0123	0.04	QV	|	|	|	|
4+35	0.0125	0.04	QV	|	|	|	|
4+40	0.0128	0.04	QV	|	|	|	|
4+45	0.0131	0.04	QV	|	|	|	|
4+50	0.0134	0.04	QV	|	|	|	|
4+55	0.0136	0.04	QV	|	|	|	|
5+ 0	0.0139	0.04	QV	|	|	|	|
5+ 5	0.0142	0.04	QV	|	|	|	|
5+10	0.0145	0.04	QV	|	|	|	|
5+15	0.0148	0.04	QV	|	|	|	|
5+20	0.0150	0.04	Q V	|	|	|	|
5+25	0.0153	0.04	Q V	|	|	|	|
5+30	0.0156	0.04	Q V	|	|	|	|
5+35	0.0159	0.04	Q V	|	|	|	|
5+40	0.0162	0.04	Q V	|	|	|	|
5+45	0.0165	0.04	Q V	|	|	|	|
5+50	0.0168	0.04	Q V	|	|	|	|
5+55	0.0170	0.04	Q V	|	|	|	|
6+ 0	0.0173	0.04	Q V	|	|	|	|
6+ 5	0.0176	0.04	Q V	|	|	|	|
6+10	0.0179	0.04	Q V	|	|	|	|
6+15	0.0182	0.04	Q V	|	|	|	|
6+20	0.0185	0.04	Q V	|	|	|	|
6+25	0.0188	0.04	Q V	|	|	|	|
6+30	0.0191	0.04	Q V	|	|	|	|
6+35	0.0194	0.04	Q V	|	|	|	|
6+40	0.0197	0.04	Q V	|	|	|	|
6+45	0.0200	0.04	Q V	|	|	|	|
6+50	0.0203	0.04	Q V	|	|	|	|
6+55	0.0207	0.04	Q V	|	|	|	|
7+ 0	0.0210	0.05	Q V	|	|	|	|
7+ 5	0.0213	0.05	Q V	|	|	|	|
7+10	0.0216	0.05	Q V	|	|	|	|
7+15	0.0219	0.05	Q V	|	|	|	|
7+20	0.0222	0.05	Q V	|	|	|	|
7+25	0.0225	0.05	Q V	|	|	|	|
7+30	0.0229	0.05	Q V	|	|	|	|
7+35	0.0232	0.05	Q V	|	|	|	|
7+40	0.0235	0.05	Q V	|	|	|	|

7+45	0.0238	0.05	Q	V				
7+50	0.0242	0.05	Q	V				
7+55	0.0245	0.05	Q	V				
8+ 0	0.0248	0.05	Q	V				
8+ 5	0.0252	0.05	Q	V				
8+10	0.0255	0.05	Q	V				
8+15	0.0258	0.05	Q	V				
8+20	0.0262	0.05	Q	V				
8+25	0.0265	0.05	Q	V				
8+30	0.0269	0.05	Q	V				
8+35	0.0272	0.05	Q	V				
8+40	0.0276	0.05	Q	V				
8+45	0.0279	0.05	Q	V				
8+50	0.0283	0.05	Q	V				
8+55	0.0286	0.05	Q	V				
9+ 0	0.0290	0.05	Q	V				
9+ 5	0.0294	0.05	Q	V				
9+10	0.0297	0.05	Q	V				
9+15	0.0301	0.05	Q	V				
9+20	0.0305	0.05	Q	V				
9+25	0.0308	0.05	Q	V				
9+30	0.0312	0.05	Q	V				
9+35	0.0316	0.05	Q	V				
9+40	0.0320	0.06	Q	V				
9+45	0.0323	0.06	Q	V				
9+50	0.0327	0.06	Q	V				
9+55	0.0331	0.06	Q	V				
10+ 0	0.0335	0.06	Q	V				
10+ 5	0.0339	0.06	Q	V				
10+10	0.0343	0.06	Q	V				
10+15	0.0347	0.06	Q	V				
10+20	0.0351	0.06	Q	V				
10+25	0.0355	0.06	Q	V				
10+30	0.0359	0.06	Q	V				
10+35	0.0363	0.06	Q	V				
10+40	0.0368	0.06	Q	V				
10+45	0.0372	0.06	Q	V				
10+50	0.0376	0.06	Q	V				
10+55	0.0380	0.06	Q	V				
11+ 0	0.0385	0.06	Q	V				
11+ 5	0.0389	0.06	Q	V				
11+10	0.0393	0.06	Q	V				
11+15	0.0398	0.06	Q	V				
11+20	0.0402	0.07	Q	V				
11+25	0.0407	0.07	Q	V				
11+30	0.0412	0.07	Q	V				
11+35	0.0416	0.07	Q	V				
11+40	0.0421	0.07	Q	V				
11+45	0.0426	0.07	Q	V				
11+50	0.0430	0.07	Q	V				
11+55	0.0435	0.07	Q	V				
12+ 0	0.0440	0.07	Q	V				
12+ 5	0.0445	0.07	Q	V				
12+10	0.0450	0.08	Q	V				
12+15	0.0456	0.08	Q	V				
12+20	0.0462	0.09	Q	V				
12+25	0.0468	0.09	Q	V				
12+30	0.0475	0.09	Q	V				
12+35	0.0481	0.10	Q	V				
12+40	0.0488	0.10	Q	V				
12+45	0.0495	0.10	Q	V				
12+50	0.0502	0.10	Q	V				
12+55	0.0509	0.10	Q	V				
13+ 0	0.0516	0.10	Q	V				
13+ 5	0.0523	0.10	Q	V				
13+10	0.0531	0.11	Q	V				
13+15	0.0538	0.11	Q	V				
13+20	0.0545	0.11	Q	V				
13+25	0.0553	0.11	Q	V				



19+15	0.2798	0.06	Q	|	|	|	V |
19+20	0.2803	0.06	Q	|	|	|	V |
19+25	0.2807	0.06	Q	|	|	|	V |
19+30	0.2811	0.06	Q	|	|	|	V |
19+35	0.2815	0.06	Q	|	|	|	V |
19+40	0.2819	0.06	Q	|	|	|	V |
19+45	0.2823	0.06	Q	|	|	|	V |
19+50	0.2826	0.06	Q	|	|	|	V |
19+55	0.2830	0.05	Q	|	|	|	V |
20+ 0	0.2834	0.05	Q	|	|	|	V |
20+ 5	0.2837	0.05	Q	|	|	|	V |
20+10	0.2841	0.05	Q	|	|	|	V |
20+15	0.2845	0.05	Q	|	|	|	V |
20+20	0.2848	0.05	Q	|	|	|	V |
20+25	0.2851	0.05	Q	|	|	|	V |
20+30	0.2855	0.05	Q	|	|	|	V |
20+35	0.2858	0.05	Q	|	|	|	V |
20+40	0.2862	0.05	Q	|	|	|	V |
20+45	0.2865	0.05	Q	|	|	|	V |
20+50	0.2868	0.05	Q	|	|	|	V |
20+55	0.2871	0.05	Q	|	|	|	V |
21+ 0	0.2874	0.05	Q	|	|	|	V |
21+ 5	0.2878	0.05	Q	|	|	|	V |
21+10	0.2881	0.05	Q	|	|	|	V |
21+15	0.2884	0.04	Q	|	|	|	V |
21+20	0.2887	0.04	Q	|	|	|	V |
21+25	0.2890	0.04	Q	|	|	|	V |
21+30	0.2893	0.04	Q	|	|	|	V |
21+35	0.2896	0.04	Q	|	|	|	V |
21+40	0.2899	0.04	Q	|	|	|	V |
21+45	0.2901	0.04	Q	|	|	|	V |
21+50	0.2904	0.04	Q	|	|	|	V |
21+55	0.2907	0.04	Q	|	|	|	V|
22+ 0	0.2910	0.04	Q	|	|	|	V|
22+ 5	0.2913	0.04	Q	|	|	|	V|
22+10	0.2916	0.04	Q	|	|	|	V|
22+15	0.2918	0.04	Q	|	|	|	V|
22+20	0.2921	0.04	Q	|	|	|	V|
22+25	0.2924	0.04	Q	|	|	|	V|
22+30	0.2926	0.04	Q	|	|	|	V|
22+35	0.2929	0.04	Q	|	|	|	V|
22+40	0.2932	0.04	Q	|	|	|	V|
22+45	0.2934	0.04	Q	|	|	|	V|
22+50	0.2937	0.04	Q	|	|	|	V|
22+55	0.2939	0.04	Q	|	|	|	V|
23+ 0	0.2942	0.04	Q	|	|	|	V|
23+ 5	0.2944	0.04	Q	|	|	|	V|
23+10	0.2947	0.04	Q	|	|	|	V|
23+15	0.2949	0.04	Q	|	|	|	V|
23+20	0.2952	0.04	Q	|	|	|	V|
23+25	0.2954	0.04	Q	|	|	|	V|
23+30	0.2957	0.04	Q	|	|	|	V|
23+35	0.2959	0.04	Q	|	|	|	V|
23+40	0.2962	0.03	Q	|	|	|	V|
23+45	0.2964	0.03	Q	|	|	|	V|
23+50	0.2966	0.03	Q	|	|	|	V|
23+55	0.2969	0.03	Q	|	|	|	V|
24+ 0	0.2971	0.03	Q	|	|	|	V|
24+ 5	0.2973	0.03	Q	|	|	|	V|
24+10	0.2975	0.03	Q	|	|	|	V|
24+15	0.2977	0.02	Q	|	|	|	V|
24+20	0.2977	0.01	Q	|	|	|	V|
24+25	0.2978	0.01	Q	|	|	|	V|
24+30	0.2979	0.01	Q	|	|	|	V|
24+35	0.2979	0.01	Q	|	|	|	V|
24+40	0.2979	0.01	Q	|	|	|	V|
24+45	0.2980	0.00	Q	|	|	|	V|
24+50	0.2980	0.00	Q	|	|	|	V|
24+55	0.2980	0.00	Q	|	|	|	V|

```
   25+ 0       0.2980      0.00  Q        |         |         |        V|
   25+ 5       0.2980      0.00  Q        |         |         |        V|
   25+10       0.2980      0.00  Q        |         |         |        V|
   25+15       0.2981      0.00  Q        |         |         |        V|
   25+20       0.2981      0.00  Q        |         |         |        V|
   25+25       0.2981      0.00  Q        |         |         |        V|
   25+30       0.2981      0.00  Q        |         |         |        V|
   25+35       0.2981      0.00  Q        |         |         |        V|
   25+40       0.2981      0.00  Q        |         |         |        V|
   25+45       0.2981      0.00  Q        |         |         |        V|
   25+50       0.2981      0.00  Q        |         |         |         V
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Study date 04/15/24

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

Program License Serial Number 6320

204742 ROUTE 66 TRUCK TERMINAL
EXISTING CONDITIONS AREA "A"
5-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-15-24

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 (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
9.90	1	0.91
Rainfall data for year 2		
9.90	6	1.58
Rainfall data for year 2		
9.90	24	2.75
Rainfall data for year 100		
9.90	1	1.31
Rainfall data for year 100		
9.90	6	3.25
Rainfall data for year 100		
9.90	24	6.80

++

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

SCS curve No.(AMCII)	SCS curve NO.(AMC 1)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
73.0	54.6	9.90	1.000	0.752	0.970	0.730

Area-averaged adjusted loss rate Fm (In/Hr) = 0.730

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

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
9.60	0.970	73.0	54.6	8.32	0.108
0.30	0.030	98.0	98.0	0.20	0.937

Area-averaged catchment yield fraction, Y = 0.133
Area-averaged low loss fraction, Yb = 0.867
User entry of time of concentration = 0.290 (hours)
++
Watershed area = 9.90(Ac.)
Catchment Lag time = 0.232 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.9195
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.730(In/Hr)
Average low loss rate fraction (Yb) = 0.867 (decimal)
VALLEY UNDEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.292(In)
Computed peak 30-minute rainfall = 0.598(In)
Specified peak 1-hour rainfall = 0.790(In)
Computed peak 3-hour rainfall = 1.384(In)
Specified peak 6-hour rainfall = 1.971(In)
Specified peak 24-hour rainfall = 3.699(In)

Rainfall depth area reduction factors:
Using a total area of 9.90(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.292(In)
30-minute factor = 1.000 Adjusted rainfall = 0.598(In)
1-hour factor = 1.000 Adjusted rainfall = 0.789(In)
3-hour factor = 1.000 Adjusted rainfall = 1.384(In)
6-hour factor = 1.000 Adjusted rainfall = 1.971(In)
24-hour factor = 1.000 Adjusted rainfall = 3.699(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 = 119.73 (CFS))	
1	3.719	4.453
2	18.479	17.671
3	42.496	28.755
4	61.763	23.068
5	71.755	11.963
6	77.545	6.932
7	81.822	5.122
8	85.173	4.012
9	87.792	3.136
10	89.955	2.590
11	91.695	2.083
12	93.114	1.700
13	94.260	1.371
14	95.346	1.301
15	96.258	1.092
16	97.015	0.905
17	97.662	0.775
18	98.200	0.645
19	98.644	0.532
20	99.004	0.431
21	99.364	0.430
22	99.723	0.430
23	100.000	0.332

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2921	0.2921
2	0.3854	0.0933
3	0.4533	0.0679
4	0.5086	0.0553
5	0.5561	0.0475
6	0.5981	0.0421
7	0.6362	0.0380
8	0.6711	0.0349
9	0.7034	0.0324
10	0.7337	0.0303
11	0.7622	0.0285
12	0.7892	0.0270
13	0.8222	0.0329
14	0.8539	0.0317
15	0.8845	0.0306
16	0.9142	0.0297
17	0.9430	0.0288
18	0.9709	0.0279
19	0.9981	0.0272
20	1.0246	0.0265
21	1.0505	0.0259
22	1.0757	0.0253
23	1.1004	0.0247
24	1.1246	0.0242
25	1.1483	0.0237
26	1.1716	0.0232
27	1.1944	0.0228
28	1.2168	0.0224
29	1.2388	0.0220
30	1.2605	0.0216
31	1.2818	0.0213
32	1.3027	0.0210
33	1.3234	0.0206
34	1.3437	0.0203
35	1.3638	0.0201
36	1.3835	0.0198
37	1.4030	0.0195
38	1.4223	0.0192
39	1.4413	0.0190
40	1.4600	0.0188
41	1.4785	0.0185
42	1.4968	0.0183
43	1.5149	0.0181
44	1.5328	0.0179
45	1.5505	0.0177
46	1.5680	0.0175
47	1.5853	0.0173
48	1.6025	0.0171
49	1.6194	0.0170
50	1.6362	0.0168
51	1.6528	0.0166
52	1.6693	0.0165
53	1.6856	0.0163
54	1.7018	0.0162
55	1.7178	0.0160
56	1.7337	0.0159
57	1.7494	0.0157
58	1.7650	0.0156
59	1.7805	0.0155
60	1.7959	0.0153
61	1.8111	0.0152
62	1.8262	0.0151
63	1.8412	0.0150
64	1.8560	0.0149
65	1.8708	0.0148
66	1.8854	0.0146
67	1.9000	0.0145

68	1.9144	0.0144
69	1.9287	0.0143
70	1.9429	0.0142
71	1.9571	0.0141
72	1.9711	0.0140
73	1.9835	0.0124
74	1.9958	0.0123
75	2.0080	0.0122
76	2.0201	0.0121
77	2.0321	0.0120
78	2.0440	0.0119
79	2.0559	0.0119
80	2.0677	0.0118
81	2.0794	0.0117
82	2.0910	0.0116
83	2.1025	0.0115
84	2.1140	0.0115
85	2.1254	0.0114
86	2.1367	0.0113
87	2.1479	0.0112
88	2.1591	0.0112
89	2.1702	0.0111
90	2.1812	0.0110
91	2.1922	0.0110
92	2.2031	0.0109
93	2.2139	0.0108
94	2.2247	0.0108
95	2.2354	0.0107
96	2.2461	0.0107
97	2.2567	0.0106
98	2.2672	0.0105
99	2.2777	0.0105
100	2.2881	0.0104
101	2.2985	0.0104
102	2.3088	0.0103
103	2.3190	0.0102
104	2.3292	0.0102
105	2.3394	0.0101
106	2.3494	0.0101
107	2.3595	0.0100
108	2.3695	0.0100
109	2.3794	0.0099
110	2.3893	0.0099
111	2.3991	0.0098
112	2.4089	0.0098
113	2.4186	0.0097
114	2.4283	0.0097
115	2.4380	0.0096
116	2.4476	0.0096
117	2.4571	0.0096
118	2.4667	0.0095
119	2.4761	0.0095
120	2.4856	0.0094
121	2.4949	0.0094
122	2.5043	0.0093
123	2.5136	0.0093
124	2.5228	0.0093
125	2.5320	0.0092
126	2.5412	0.0092
127	2.5504	0.0091
128	2.5595	0.0091
129	2.5685	0.0091
130	2.5775	0.0090
131	2.5865	0.0090
132	2.5955	0.0089
133	2.6044	0.0089
134	2.6132	0.0089
135	2.6221	0.0088
136	2.6309	0.0088

137	2.6396	0.0088
138	2.6484	0.0087
139	2.6571	0.0087
140	2.6657	0.0087
141	2.6744	0.0086
142	2.6829	0.0086
143	2.6915	0.0086
144	2.7000	0.0085
145	2.7085	0.0085
146	2.7170	0.0085
147	2.7254	0.0084
148	2.7338	0.0084
149	2.7422	0.0084
150	2.7505	0.0083
151	2.7589	0.0083
152	2.7671	0.0083
153	2.7754	0.0082
154	2.7836	0.0082
155	2.7918	0.0082
156	2.8000	0.0082
157	2.8081	0.0081
158	2.8162	0.0081
159	2.8243	0.0081
160	2.8323	0.0081
161	2.8403	0.0080
162	2.8483	0.0080
163	2.8563	0.0080
164	2.8643	0.0079
165	2.8722	0.0079
166	2.8801	0.0079
167	2.8879	0.0079
168	2.8958	0.0078
169	2.9036	0.0078
170	2.9114	0.0078
171	2.9191	0.0078
172	2.9269	0.0077
173	2.9346	0.0077
174	2.9423	0.0077
175	2.9499	0.0077
176	2.9576	0.0076
177	2.9652	0.0076
178	2.9728	0.0076
179	2.9804	0.0076
180	2.9879	0.0075
181	2.9954	0.0075
182	3.0029	0.0075
183	3.0104	0.0075
184	3.0179	0.0075
185	3.0253	0.0074
186	3.0327	0.0074
187	3.0401	0.0074
188	3.0475	0.0074
189	3.0548	0.0073
190	3.0621	0.0073
191	3.0695	0.0073
192	3.0767	0.0073
193	3.0840	0.0073
194	3.0912	0.0072
195	3.0985	0.0072
196	3.1057	0.0072
197	3.1129	0.0072
198	3.1200	0.0072
199	3.1272	0.0071
200	3.1343	0.0071
201	3.1414	0.0071
202	3.1485	0.0071
203	3.1555	0.0071
204	3.1626	0.0070
205	3.1696	0.0070

206	3.1766	0.0070
207	3.1836	0.0070
208	3.1906	0.0070
209	3.1976	0.0070
210	3.2045	0.0069
211	3.2114	0.0069
212	3.2183	0.0069
213	3.2252	0.0069
214	3.2321	0.0069
215	3.2389	0.0068
216	3.2457	0.0068
217	3.2525	0.0068
218	3.2593	0.0068
219	3.2661	0.0068
220	3.2729	0.0068
221	3.2796	0.0067
222	3.2864	0.0067
223	3.2931	0.0067
224	3.2998	0.0067
225	3.3064	0.0067
226	3.3131	0.0067
227	3.3198	0.0066
228	3.3264	0.0066
229	3.3330	0.0066
230	3.3396	0.0066
231	3.3462	0.0066
232	3.3528	0.0066
233	3.3593	0.0066
234	3.3658	0.0065
235	3.3724	0.0065
236	3.3789	0.0065
237	3.3854	0.0065
238	3.3918	0.0065
239	3.3983	0.0065
240	3.4048	0.0064
241	3.4112	0.0064
242	3.4176	0.0064
243	3.4240	0.0064
244	3.4304	0.0064
245	3.4368	0.0064
246	3.4431	0.0064
247	3.4495	0.0063
248	3.4558	0.0063
249	3.4621	0.0063
250	3.4684	0.0063
251	3.4747	0.0063
252	3.4810	0.0063
253	3.4873	0.0063
254	3.4935	0.0063
255	3.4998	0.0062
256	3.5060	0.0062
257	3.5122	0.0062
258	3.5184	0.0062
259	3.5246	0.0062
260	3.5308	0.0062
261	3.5369	0.0062
262	3.5431	0.0061
263	3.5492	0.0061
264	3.5553	0.0061
265	3.5614	0.0061
266	3.5675	0.0061
267	3.5736	0.0061
268	3.5797	0.0061
269	3.5857	0.0061
270	3.5918	0.0060
271	3.5978	0.0060
272	3.6038	0.0060
273	3.6098	0.0060
274	3.6158	0.0060

275	3.6218	0.0060
276	3.6278	0.0060
277	3.6337	0.0060
278	3.6397	0.0059
279	3.6456	0.0059
280	3.6516	0.0059
281	3.6575	0.0059
282	3.6634	0.0059
283	3.6693	0.0059
284	3.6752	0.0059
285	3.6810	0.0059
286	3.6869	0.0059
287	3.6927	0.0058
288	3.6986	0.0058

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0058	0.0051	0.0008
2	0.0058	0.0051	0.0008
3	0.0059	0.0051	0.0008
4	0.0059	0.0051	0.0008
5	0.0059	0.0051	0.0008
6	0.0059	0.0051	0.0008
7	0.0059	0.0051	0.0008
8	0.0059	0.0052	0.0008
9	0.0060	0.0052	0.0008
10	0.0060	0.0052	0.0008
11	0.0060	0.0052	0.0008
12	0.0060	0.0052	0.0008
13	0.0060	0.0052	0.0008
14	0.0061	0.0053	0.0008
15	0.0061	0.0053	0.0008
16	0.0061	0.0053	0.0008
17	0.0061	0.0053	0.0008
18	0.0061	0.0053	0.0008
19	0.0062	0.0053	0.0008
20	0.0062	0.0054	0.0008
21	0.0062	0.0054	0.0008
22	0.0062	0.0054	0.0008
23	0.0062	0.0054	0.0008
24	0.0063	0.0054	0.0008
25	0.0063	0.0054	0.0008
26	0.0063	0.0055	0.0008
27	0.0063	0.0055	0.0008
28	0.0063	0.0055	0.0008
29	0.0064	0.0055	0.0008
30	0.0064	0.0055	0.0008
31	0.0064	0.0056	0.0009
32	0.0064	0.0056	0.0009
33	0.0064	0.0056	0.0009
34	0.0065	0.0056	0.0009
35	0.0065	0.0056	0.0009
36	0.0065	0.0056	0.0009
37	0.0065	0.0057	0.0009
38	0.0066	0.0057	0.0009
39	0.0066	0.0057	0.0009
40	0.0066	0.0057	0.0009
41	0.0066	0.0057	0.0009
42	0.0066	0.0058	0.0009
43	0.0067	0.0058	0.0009
44	0.0067	0.0058	0.0009
45	0.0067	0.0058	0.0009
46	0.0067	0.0058	0.0009
47	0.0068	0.0059	0.0009
48	0.0068	0.0059	0.0009
49	0.0068	0.0059	0.0009
50	0.0068	0.0059	0.0009

51	0.0069	0.0060	0.0009
52	0.0069	0.0060	0.0009
53	0.0069	0.0060	0.0009
54	0.0070	0.0060	0.0009
55	0.0070	0.0061	0.0009
56	0.0070	0.0061	0.0009
57	0.0070	0.0061	0.0009
58	0.0071	0.0061	0.0009
59	0.0071	0.0062	0.0009
60	0.0071	0.0062	0.0009
61	0.0072	0.0062	0.0010
62	0.0072	0.0062	0.0010
63	0.0072	0.0063	0.0010
64	0.0072	0.0063	0.0010
65	0.0073	0.0063	0.0010
66	0.0073	0.0063	0.0010
67	0.0073	0.0064	0.0010
68	0.0074	0.0064	0.0010
69	0.0074	0.0064	0.0010
70	0.0074	0.0064	0.0010
71	0.0075	0.0065	0.0010
72	0.0075	0.0065	0.0010
73	0.0075	0.0065	0.0010
74	0.0076	0.0066	0.0010
75	0.0076	0.0066	0.0010
76	0.0076	0.0066	0.0010
77	0.0077	0.0067	0.0010
78	0.0077	0.0067	0.0010
79	0.0078	0.0067	0.0010
80	0.0078	0.0068	0.0010
81	0.0078	0.0068	0.0010
82	0.0079	0.0068	0.0010
83	0.0079	0.0069	0.0011
84	0.0079	0.0069	0.0011
85	0.0080	0.0069	0.0011
86	0.0080	0.0070	0.0011
87	0.0081	0.0070	0.0011
88	0.0081	0.0070	0.0011
89	0.0082	0.0071	0.0011
90	0.0082	0.0071	0.0011
91	0.0082	0.0072	0.0011
92	0.0083	0.0072	0.0011
93	0.0083	0.0072	0.0011
94	0.0084	0.0073	0.0011
95	0.0084	0.0073	0.0011
96	0.0085	0.0073	0.0011
97	0.0085	0.0074	0.0011
98	0.0086	0.0074	0.0011
99	0.0086	0.0075	0.0011
100	0.0087	0.0075	0.0012
101	0.0087	0.0076	0.0012
102	0.0088	0.0076	0.0012
103	0.0088	0.0077	0.0012
104	0.0089	0.0077	0.0012
105	0.0089	0.0078	0.0012
106	0.0090	0.0078	0.0012
107	0.0091	0.0079	0.0012
108	0.0091	0.0079	0.0012
109	0.0092	0.0080	0.0012
110	0.0092	0.0080	0.0012
111	0.0093	0.0081	0.0012
112	0.0093	0.0081	0.0012
113	0.0094	0.0082	0.0013
114	0.0095	0.0082	0.0013
115	0.0096	0.0083	0.0013
116	0.0096	0.0083	0.0013
117	0.0097	0.0084	0.0013
118	0.0097	0.0084	0.0013
119	0.0098	0.0085	0.0013

120	0.0099	0.0086	0.0013
121	0.0100	0.0087	0.0013
122	0.0100	0.0087	0.0013
123	0.0101	0.0088	0.0013
124	0.0102	0.0088	0.0014
125	0.0103	0.0089	0.0014
126	0.0104	0.0090	0.0014
127	0.0105	0.0091	0.0014
128	0.0105	0.0091	0.0014
129	0.0107	0.0092	0.0014
130	0.0107	0.0093	0.0014
131	0.0108	0.0094	0.0014
132	0.0109	0.0095	0.0015
133	0.0110	0.0096	0.0015
134	0.0111	0.0096	0.0015
135	0.0112	0.0097	0.0015
136	0.0113	0.0098	0.0015
137	0.0115	0.0099	0.0015
138	0.0115	0.0100	0.0015
139	0.0117	0.0101	0.0016
140	0.0118	0.0102	0.0016
141	0.0119	0.0103	0.0016
142	0.0120	0.0104	0.0016
143	0.0122	0.0106	0.0016
144	0.0123	0.0107	0.0016
145	0.0140	0.0122	0.0019
146	0.0141	0.0122	0.0019
147	0.0143	0.0124	0.0019
148	0.0144	0.0125	0.0019
149	0.0146	0.0127	0.0019
150	0.0148	0.0128	0.0020
151	0.0150	0.0130	0.0020
152	0.0151	0.0131	0.0020
153	0.0153	0.0133	0.0020
154	0.0155	0.0134	0.0021
155	0.0157	0.0136	0.0021
156	0.0159	0.0138	0.0021
157	0.0162	0.0140	0.0022
158	0.0163	0.0141	0.0022
159	0.0166	0.0144	0.0022
160	0.0168	0.0146	0.0022
161	0.0171	0.0149	0.0023
162	0.0173	0.0150	0.0023
163	0.0177	0.0153	0.0024
164	0.0179	0.0155	0.0024
165	0.0183	0.0159	0.0024
166	0.0185	0.0161	0.0025
167	0.0190	0.0165	0.0025
168	0.0192	0.0167	0.0026
169	0.0198	0.0171	0.0026
170	0.0201	0.0174	0.0027
171	0.0206	0.0179	0.0027
172	0.0210	0.0182	0.0028
173	0.0216	0.0188	0.0029
174	0.0220	0.0191	0.0029
175	0.0228	0.0198	0.0030
176	0.0232	0.0202	0.0031
177	0.0242	0.0210	0.0032
178	0.0247	0.0214	0.0033
179	0.0259	0.0224	0.0034
180	0.0265	0.0230	0.0035
181	0.0279	0.0242	0.0037
182	0.0288	0.0249	0.0038
183	0.0306	0.0266	0.0041
184	0.0317	0.0275	0.0042
185	0.0270	0.0234	0.0036
186	0.0285	0.0247	0.0038
187	0.0324	0.0281	0.0043
188	0.0349	0.0303	0.0046

189	0.0421	0.0365	0.0056
190	0.0475	0.0412	0.0063
191	0.0679	0.0588	0.0090
192	0.0933	0.0608	0.0325
193	0.2921	0.0608	0.2313
194	0.0553	0.0479	0.0074
195	0.0380	0.0330	0.0051
196	0.0303	0.0262	0.0040
197	0.0329	0.0286	0.0044
198	0.0297	0.0257	0.0039
199	0.0272	0.0236	0.0036
200	0.0253	0.0219	0.0034
201	0.0237	0.0205	0.0032
202	0.0224	0.0194	0.0030
203	0.0213	0.0185	0.0028
204	0.0203	0.0176	0.0027
205	0.0195	0.0169	0.0026
206	0.0188	0.0163	0.0025
207	0.0181	0.0157	0.0024
208	0.0175	0.0152	0.0023
209	0.0170	0.0147	0.0023
210	0.0165	0.0143	0.0022
211	0.0160	0.0139	0.0021
212	0.0156	0.0135	0.0021
213	0.0152	0.0132	0.0020
214	0.0149	0.0129	0.0020
215	0.0145	0.0126	0.0019
216	0.0142	0.0123	0.0019
217	0.0124	0.0107	0.0016
218	0.0121	0.0105	0.0016
219	0.0119	0.0103	0.0016
220	0.0116	0.0101	0.0015
221	0.0114	0.0099	0.0015
222	0.0112	0.0097	0.0015
223	0.0110	0.0095	0.0015
224	0.0108	0.0093	0.0014
225	0.0106	0.0092	0.0014
226	0.0104	0.0090	0.0014
227	0.0102	0.0089	0.0014
228	0.0101	0.0087	0.0013
229	0.0099	0.0086	0.0013
230	0.0098	0.0085	0.0013
231	0.0096	0.0084	0.0013
232	0.0095	0.0082	0.0013
233	0.0094	0.0081	0.0012
234	0.0093	0.0080	0.0012
235	0.0091	0.0079	0.0012
236	0.0090	0.0078	0.0012
237	0.0089	0.0077	0.0012
238	0.0088	0.0076	0.0012
239	0.0087	0.0075	0.0012
240	0.0086	0.0075	0.0011
241	0.0085	0.0074	0.0011
242	0.0084	0.0073	0.0011
243	0.0083	0.0072	0.0011
244	0.0082	0.0071	0.0011
245	0.0081	0.0071	0.0011
246	0.0081	0.0070	0.0011
247	0.0080	0.0069	0.0011
248	0.0079	0.0068	0.0011
249	0.0078	0.0068	0.0010
250	0.0077	0.0067	0.0010
251	0.0077	0.0066	0.0010
252	0.0076	0.0066	0.0010
253	0.0075	0.0065	0.0010
254	0.0075	0.0065	0.0010
255	0.0074	0.0064	0.0010
256	0.0073	0.0064	0.0010
257	0.0073	0.0063	0.0010

258	0.0072	0.0062	0.0010
259	0.0071	0.0062	0.0010
260	0.0071	0.0061	0.0009
261	0.0070	0.0061	0.0009
262	0.0070	0.0060	0.0009
263	0.0069	0.0060	0.0009
264	0.0069	0.0060	0.0009
265	0.0068	0.0059	0.0009
266	0.0068	0.0059	0.0009
267	0.0067	0.0058	0.0009
268	0.0067	0.0058	0.0009
269	0.0066	0.0057	0.0009
270	0.0066	0.0057	0.0009
271	0.0065	0.0057	0.0009
272	0.0065	0.0056	0.0009
273	0.0064	0.0056	0.0009
274	0.0064	0.0055	0.0009
275	0.0063	0.0055	0.0008
276	0.0063	0.0055	0.0008
277	0.0063	0.0054	0.0008
278	0.0062	0.0054	0.0008
279	0.0062	0.0054	0.0008
280	0.0061	0.0053	0.0008
281	0.0061	0.0053	0.0008
282	0.0061	0.0053	0.0008
283	0.0060	0.0052	0.0008
284	0.0060	0.0052	0.0008
285	0.0060	0.0052	0.0008
286	0.0059	0.0051	0.0008
287	0.0059	0.0051	0.0008
288	0.0059	0.0051	0.0008

Total soil rain loss = 2.99(In)
Total effective rainfall = 0.70(In)
Peak flow rate in flood hydrograph = 7.82(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q	|	|	|	|
0+10	0.0001	0.02	Q	|	|	|	|
0+15	0.0004	0.04	Q	|	|	|	|
0+20	0.0008	0.06	Q	|	|	|	|
0+25	0.0013	0.07	Q	|	|	|	|
0+30	0.0018	0.07	Q	|	|	|	|
0+35	0.0023	0.08	Q	|	|	|	|
0+40	0.0029	0.08	Q	|	|	|	|
0+45	0.0034	0.08	Q	|	|	|	|
0+50	0.0040	0.09	Q	|	|	|	|
0+55	0.0046	0.09	Q	|	|	|	|
1+ 0	0.0052	0.09	Q	|	|	|	|
1+ 5	0.0058	0.09	Q	|	|	|	|
1+10	0.0065	0.09	Q	|	|	|	|
1+15	0.0071	0.09	Q	|	|	|	|
1+20	0.0077	0.09	Q	|	|	|	|
1+25	0.0084	0.09	Q	|	|	|	|
1+30	0.0090	0.09	Q	|	|	|	|
1+35	0.0097	0.10	Q	|	|	|	|
1+40	0.0104	0.10	Q	|	|	|	|
1+45	0.0110	0.10	Q	|	|	|	|
1+50	0.0117	0.10	Q	|	|	|	|
1+55	0.0124	0.10	Q	|	|	|	|

2+ 0	0.0131	0.10	Q	|	|	|	|
2+ 5	0.0137	0.10	Q	|	|	|	|
2+10	0.0144	0.10	Q	|	|	|	|
2+15	0.0151	0.10	QV	|	|	|	|
2+20	0.0158	0.10	QV	|	|	|	|
2+25	0.0165	0.10	QV	|	|	|	|
2+30	0.0172	0.10	QV	|	|	|	|
2+35	0.0179	0.10	QV	|	|	|	|
2+40	0.0186	0.10	QV	|	|	|	|
2+45	0.0192	0.10	QV	|	|	|	|
2+50	0.0199	0.10	QV	|	|	|	|
2+55	0.0207	0.10	QV	|	|	|	|
3+ 0	0.0214	0.10	QV	|	|	|	|
3+ 5	0.0221	0.10	QV	|	|	|	|
3+10	0.0228	0.10	QV	|	|	|	|
3+15	0.0235	0.10	QV	|	|	|	|
3+20	0.0242	0.10	QV	|	|	|	|
3+25	0.0249	0.10	QV	|	|	|	|
3+30	0.0256	0.10	QV	|	|	|	|
3+35	0.0264	0.10	QV	|	|	|	|
3+40	0.0271	0.11	QV	|	|	|	|
3+45	0.0278	0.11	QV	|	|	|	|
3+50	0.0285	0.11	QV	|	|	|	|
3+55	0.0293	0.11	Q V	|	|	|	|
4+ 0	0.0300	0.11	Q V	|	|	|	|
4+ 5	0.0307	0.11	Q V	|	|	|	|
4+10	0.0315	0.11	Q V	|	|	|	|
4+15	0.0322	0.11	Q V	|	|	|	|
4+20	0.0330	0.11	Q V	|	|	|	|
4+25	0.0337	0.11	Q V	|	|	|	|
4+30	0.0345	0.11	Q V	|	|	|	|
4+35	0.0352	0.11	Q V	|	|	|	|
4+40	0.0360	0.11	Q V	|	|	|	|
4+45	0.0367	0.11	Q V	|	|	|	|
4+50	0.0375	0.11	Q V	|	|	|	|
4+55	0.0383	0.11	Q V	|	|	|	|
5+ 0	0.0390	0.11	Q V	|	|	|	|
5+ 5	0.0398	0.11	Q V	|	|	|	|
5+10	0.0406	0.11	Q V	|	|	|	|
5+15	0.0414	0.11	Q V	|	|	|	|
5+20	0.0422	0.11	Q V	|	|	|	|
5+25	0.0429	0.11	Q V	|	|	|	|
5+30	0.0437	0.11	Q V	|	|	|	|
5+35	0.0445	0.11	Q V	|	|	|	|
5+40	0.0453	0.12	Q V	|	|	|	|
5+45	0.0461	0.12	Q V	|	|	|	|
5+50	0.0469	0.12	Q V	|	|	|	|
5+55	0.0477	0.12	Q V	|	|	|	|
6+ 0	0.0485	0.12	Q V	|	|	|	|
6+ 5	0.0493	0.12	Q V	|	|	|	|
6+10	0.0502	0.12	Q V	|	|	|	|
6+15	0.0510	0.12	Q V	|	|	|	|
6+20	0.0518	0.12	Q V	|	|	|	|
6+25	0.0526	0.12	Q V	|	|	|	|
6+30	0.0535	0.12	Q V	|	|	|	|
6+35	0.0543	0.12	Q V	|	|	|	|
6+40	0.0551	0.12	Q V	|	|	|	|
6+45	0.0560	0.12	Q V	|	|	|	|
6+50	0.0568	0.12	Q V	|	|	|	|
6+55	0.0577	0.12	Q V	|	|	|	|
7+ 0	0.0585	0.12	Q V	|	|	|	|
7+ 5	0.0594	0.12	Q V	|	|	|	|
7+10	0.0603	0.13	Q V	|	|	|	|
7+15	0.0611	0.13	Q V	|	|	|	|
7+20	0.0620	0.13	Q V	|	|	|	|
7+25	0.0629	0.13	Q V	|	|	|	|
7+30	0.0637	0.13	Q V	|	|	|	|
7+35	0.0646	0.13	Q V	|	|	|	|
7+40	0.0655	0.13	Q V	|	|	|	|

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 7+45      0.0664      0.13  Q   V     |         |         |         |
 7+50      0.0673      0.13  Q   V     |         |         |         |
 7+55      0.0682      0.13  Q   V     |         |         |         |
 8+ 0      0.0691      0.13  Q   V     |         |         |         |
 8+ 5      0.0700      0.13  Q   V     |         |         |         |
 8+10      0.0710      0.13  Q   V     |         |         |         |
 8+15      0.0719      0.13  Q   V     |         |         |         |
 8+20      0.0728      0.13  Q    V    |         |         |         |
 8+25      0.0738      0.14  Q    V    |         |         |         |
 8+30      0.0747      0.14  Q    V    |         |         |         |
 8+35      0.0756      0.14  Q    V    |         |         |         |
 8+40      0.0766      0.14  Q    V    |         |         |         |
 8+45      0.0775      0.14  Q    V    |         |         |         |
 8+50      0.0785      0.14  Q    V    |         |         |         |
 8+55      0.0795      0.14  Q    V    |         |         |         |
 9+ 0      0.0805      0.14  Q    V    |         |         |         |
 9+ 5      0.0814      0.14  Q    V    |         |         |         |
 9+10      0.0824      0.14  Q    V    |         |         |         |
 9+15      0.0834      0.14  Q    V    |         |         |         |
 9+20      0.0844      0.15  Q    V    |         |         |         |
 9+25      0.0854      0.15  Q    V    |         |         |         |
 9+30      0.0864      0.15  Q    V    |         |         |         |
 9+35      0.0874      0.15  Q     V   |         |         |         |
 9+40      0.0885      0.15  Q     V   |         |         |         |
 9+45      0.0895      0.15  Q     V   |         |         |         |
 9+50      0.0905      0.15  Q     V   |         |         |         |
 9+55      0.0916      0.15  Q     V   |         |         |         |
10+ 0      0.0926      0.15  Q     V   |         |         |         |
10+ 5      0.0937      0.15  Q     V   |         |         |         |
10+10      0.0948      0.16  Q     V   |         |         |         |
10+15      0.0959      0.16  Q     V   |         |         |         |
10+20      0.0969      0.16  Q     V   |         |         |         |
10+25      0.0980      0.16  Q     V   |         |         |         |
10+30      0.0991      0.16  Q     V   |         |         |         |
10+35      0.1002      0.16  Q     V   |         |         |         |
10+40      0.1014      0.16  Q     V   |         |         |         |
10+45      0.1025      0.16  Q      V  |         |         |         |
10+50      0.1036      0.17  Q      V  |         |         |         |
10+55      0.1048      0.17  Q      V  |         |         |         |
11+ 0      0.1059      0.17  Q      V  |         |         |         |
11+ 5      0.1071      0.17  Q      V  |         |         |         |
11+10      0.1083      0.17  Q      V  |         |         |         |
11+15      0.1095      0.17  Q      V  |         |         |         |
11+20      0.1107      0.17  Q      V  |         |         |         |
11+25      0.1119      0.18  Q      V  |         |         |         |
11+30      0.1131      0.18  Q      V  |         |         |         |
11+35      0.1143      0.18  Q      V  |         |         |         |
11+40      0.1156      0.18  Q      V  |         |         |         |
11+45      0.1168      0.18  Q       V |         |         |         |
11+50      0.1181      0.18  Q       V |         |         |         |
11+55      0.1194      0.19  Q       V |         |         |         |
12+ 0      0.1207      0.19  Q       V |         |         |         |
12+ 5      0.1220      0.19  Q       V |         |         |         |
12+10      0.1233      0.20  Q       V |         |         |         |
12+15      0.1248      0.20  Q       V |         |         |         |
12+20      0.1262      0.21  Q       V |         |         |         |
12+25      0.1277      0.22  Q       V |         |         |         |
12+30      0.1292      0.22  Q       V |         |         |         |
12+35      0.1308      0.22  Q        V|         |         |         |
12+40      0.1323      0.23  Q        V|         |         |         |
12+45      0.1339      0.23  Q        V|         |         |         |
12+50      0.1355      0.23  Q        V|         |         |         |
12+55      0.1371      0.24  Q        V|         |         |         |
13+ 0      0.1388      0.24  Q        V|         |         |         |
13+ 5      0.1405      0.24  Q        V|         |         |         |
13+10      0.1422      0.25  Q        V|         |         |         |
13+15      0.1439      0.25  Q        V|         |         |         |
13+20      0.1456      0.25  |Q        V         |         |         |
13+25      0.1474      0.26  |Q        V         |         |         |
```

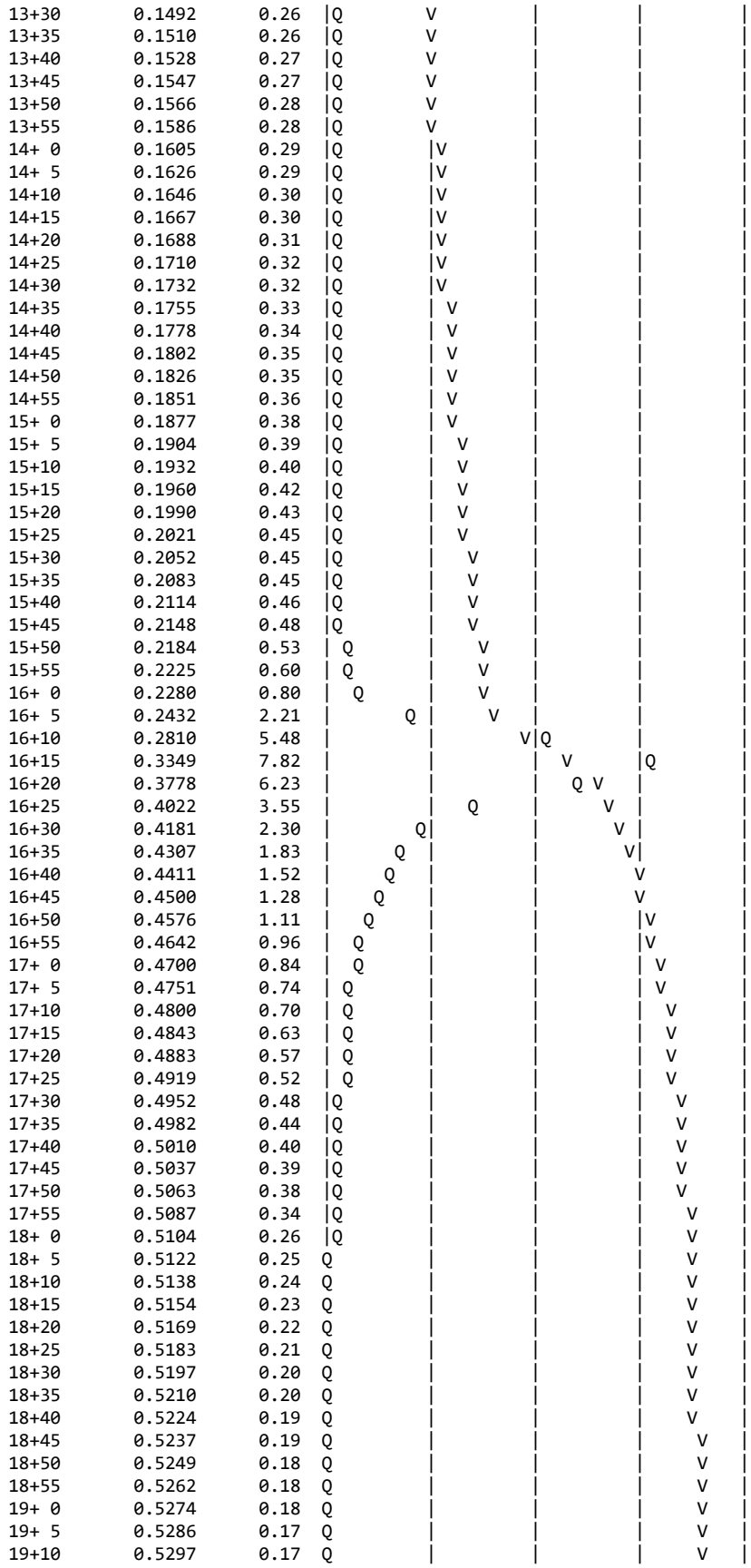

19+15	0.5309	0.17	Q	|	|	|	V |
19+20	0.5320	0.16	Q	|	|	|	V |
19+25	0.5331	0.16	Q	|	|	|	V |
19+30	0.5342	0.16	Q	|	|	|	V |
19+35	0.5352	0.16	Q	|	|	|	V |
19+40	0.5363	0.15	Q	|	|	|	V |
19+45	0.5373	0.15	Q	|	|	|	V |
19+50	0.5384	0.15	Q	|	|	|	V |
19+55	0.5394	0.15	Q	|	|	|	V |
20+ 0	0.5404	0.14	Q	|	|	|	V |
20+ 5	0.5414	0.14	Q	|	|	|	V |
20+10	0.5423	0.14	Q	|	|	|	V |
20+15	0.5433	0.14	Q	|	|	|	V |
20+20	0.5442	0.14	Q	|	|	|	V |
20+25	0.5452	0.14	Q	|	|	|	V |
20+30	0.5461	0.13	Q	|	|	|	V |
20+35	0.5470	0.13	Q	|	|	|	V |
20+40	0.5479	0.13	Q	|	|	|	V |
20+45	0.5488	0.13	Q	|	|	|	V |
20+50	0.5497	0.13	Q	|	|	|	V |
20+55	0.5506	0.13	Q	|	|	|	V |
21+ 0	0.5515	0.13	Q	|	|	|	V |
21+ 5	0.5523	0.13	Q	|	|	|	V |
21+10	0.5532	0.12	Q	|	|	|	V |
21+15	0.5540	0.12	Q	|	|	|	V |
21+20	0.5549	0.12	Q	|	|	|	V |
21+25	0.5557	0.12	Q	|	|	|	V |
21+30	0.5565	0.12	Q	|	|	|	V |
21+35	0.5573	0.12	Q	|	|	|	V |
21+40	0.5581	0.12	Q	|	|	|	V |
21+45	0.5589	0.12	Q	|	|	|	V |
21+50	0.5597	0.12	Q	|	|	|	V |
21+55	0.5605	0.11	Q	|	|	|	V |
22+ 0	0.5613	0.11	Q	|	|	|	V |
22+ 5	0.5621	0.11	Q	|	|	|	V |
22+10	0.5628	0.11	Q	|	|	|	V |
22+15	0.5636	0.11	Q	|	|	|	V |
22+20	0.5643	0.11	Q	|	|	|	V |
22+25	0.5651	0.11	Q	|	|	|	V |
22+30	0.5658	0.11	Q	|	|	|	V |
22+35	0.5666	0.11	Q	|	|	|	V |
22+40	0.5673	0.11	Q	|	|	|	V|
22+45	0.5680	0.11	Q	|	|	|	V|
22+50	0.5688	0.10	Q	|	|	|	V|
22+55	0.5695	0.10	Q	|	|	|	V|
23+ 0	0.5702	0.10	Q	|	|	|	V|
23+ 5	0.5709	0.10	Q	|	|	|	V|
23+10	0.5716	0.10	Q	|	|	|	V|
23+15	0.5723	0.10	Q	|	|	|	V|
23+20	0.5730	0.10	Q	|	|	|	V|
23+25	0.5737	0.10	Q	|	|	|	V|
23+30	0.5744	0.10	Q	|	|	|	V|
23+35	0.5750	0.10	Q	|	|	|	V|
23+40	0.5757	0.10	Q	|	|	|	V|
23+45	0.5764	0.10	Q	|	|	|	V|
23+50	0.5771	0.10	Q	|	|	|	V|
23+55	0.5777	0.10	Q	|	|	|	V|
24+ 0	0.5784	0.10	Q	|	|	|	V|
24+ 5	0.5790	0.09	Q	|	|	|	V|
24+10	0.5795	0.08	Q	|	|	|	V|
24+15	0.5799	0.05	Q	|	|	|	V|
24+20	0.5802	0.04	Q	|	|	|	V|
24+25	0.5804	0.03	Q	|	|	|	V|
24+30	0.5805	0.02	Q	|	|	|	V|
24+35	0.5806	0.02	Q	|	|	|	V|
24+40	0.5807	0.01	Q	|	|	|	V|
24+45	0.5808	0.01	Q	|	|	|	V|
24+50	0.5809	0.01	Q	|	|	|	V|
24+55	0.5809	0.01	Q	|	|	|	V|

```
   25+ 0       0.5810      0.01  Q        |         |         |        V|
   25+ 5       0.5810      0.01  Q        |         |         |        V|
   25+10       0.5810      0.00  Q        |         |         |        V|
   25+15       0.5811      0.00  Q        |         |         |        V|
   25+20       0.5811      0.00  Q        |         |         |        V|
   25+25       0.5811      0.00  Q        |         |         |        V|
   25+30       0.5811      0.00  Q        |         |         |        V|
   25+35       0.5811      0.00  Q        |         |         |        V|
   25+40       0.5811      0.00  Q        |         |         |        V|
   25+45       0.5811      0.00  Q        |         |         |        V|
   25+50       0.5811      0.00  Q        |         |         |        V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Study date 04/15/24

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

Program License Serial Number 6320

204742 ROUTE 66 TRUCK TERMINAL
EXISTING CONDITIONS AREA "A"
10-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-15-24

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 (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
9.90	1	0.91
Rainfall data for year 2		
9.90	6	1.58
Rainfall data for year 2		
9.90	24	2.75
Rainfall data for year 100		
9.90	1	1.31
Rainfall data for year 100		
9.90	6	3.25
Rainfall data for year 100		
9.90	24	6.80

++

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

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
73.0	73.0	9.90	1.000	0.485	0.970	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 (AMC2)	S	Pervious Yield Fr
9.60	0.970	73.0	73.0	3.70	0.415
0.30	0.030	98.0	98.0	0.20	0.947

Area-averaged catchment yield fraction, Y = 0.431
Area-averaged low loss fraction, Yb = 0.569
User entry of time of concentration = 0.290 (hours)
++
Watershed area = 9.90(Ac.)
Catchment Lag time = 0.232 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.9195
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.471(In/Hr)
Average low loss rate fraction (Yb) = 0.569 (decimal)
VALLEY UNDEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.337(In)
Computed peak 30-minute rainfall = 0.690(In)
Specified peak 1-hour rainfall = 0.910(In)
Computed peak 3-hour rainfall = 1.593(In)
Specified peak 6-hour rainfall = 2.267(In)
Specified peak 24-hour rainfall = 4.416(In)

Rainfall depth area reduction factors:
Using a total area of 9.90(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.337(In)
30-minute factor = 1.000 Adjusted rainfall = 0.689(In)
1-hour factor = 1.000 Adjusted rainfall = 0.910(In)
3-hour factor = 1.000 Adjusted rainfall = 1.593(In)
6-hour factor = 1.000 Adjusted rainfall = 2.267(In)
24-hour factor = 1.000 Adjusted rainfall = 4.416(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 = 119.73 (CFS))	
1	3.719	4.453
2	18.479	17.671
3	42.496	28.755
4	61.763	23.068
5	71.755	11.963
6	77.545	6.932
7	81.822	5.122
8	85.173	4.012
9	87.792	3.136
10	89.955	2.590
11	91.695	2.083
12	93.114	1.700
13	94.260	1.371
14	95.346	1.301
15	96.258	1.092
16	97.015	0.905
17	97.662	0.775
18	98.200	0.645
19	98.644	0.532
20	99.004	0.431
21	99.364	0.430
22	99.723	0.430
23	100.000	0.332

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3366	0.3366
2	0.4442	0.1076
3	0.5224	0.0782
4	0.5861	0.0637
5	0.6408	0.0547
6	0.6893	0.0485
7	0.7332	0.0438
8	0.7734	0.0402
9	0.8107	0.0373
10	0.8456	0.0349
11	0.8785	0.0329
12	0.9096	0.0311
13	0.9475	0.0379
14	0.9839	0.0365
15	1.0192	0.0352
16	1.0533	0.0341
17	1.0863	0.0331
18	1.1184	0.0321
19	1.1497	0.0313
20	1.1802	0.0305
21	1.2099	0.0297
22	1.2389	0.0290
23	1.2673	0.0284
24	1.2951	0.0278
25	1.3223	0.0272
26	1.3491	0.0267
27	1.3753	0.0262
28	1.4010	0.0257
29	1.4263	0.0253
30	1.4512	0.0249
31	1.4756	0.0245
32	1.4997	0.0241
33	1.5234	0.0237
34	1.5468	0.0234
35	1.5698	0.0230
36	1.5925	0.0227
37	1.6149	0.0224
38	1.6370	0.0221
39	1.6588	0.0218
40	1.6803	0.0215
41	1.7016	0.0213
42	1.7226	0.0210
43	1.7434	0.0208
44	1.7639	0.0205
45	1.7842	0.0203
46	1.8043	0.0201
47	1.8242	0.0199
48	1.8439	0.0197
49	1.8634	0.0195
50	1.8826	0.0193
51	1.9017	0.0191
52	1.9206	0.0189
53	1.9394	0.0187
54	1.9579	0.0186
55	1.9763	0.0184
56	1.9945	0.0182
57	2.0126	0.0181
58	2.0305	0.0179
59	2.0483	0.0178
60	2.0659	0.0176
61	2.0834	0.0175
62	2.1007	0.0173
63	2.1179	0.0172
64	2.1349	0.0171
65	2.1519	0.0169
66	2.1687	0.0168
67	2.1854	0.0167

68	2.2019	0.0166
69	2.2184	0.0164
70	2.2347	0.0163
71	2.2509	0.0162
72	2.2670	0.0161
73	2.2821	0.0151
74	2.2971	0.0150
75	2.3119	0.0149
76	2.3267	0.0148
77	2.3414	0.0147
78	2.3560	0.0146
79	2.3704	0.0145
80	2.3848	0.0144
81	2.3991	0.0143
82	2.4133	0.0142
83	2.4274	0.0141
84	2.4415	0.0140
85	2.4554	0.0139
86	2.4693	0.0139
87	2.4830	0.0138
88	2.4967	0.0137
89	2.5103	0.0136
90	2.5238	0.0135
91	2.5373	0.0135
92	2.5507	0.0134
93	2.5640	0.0133
94	2.5772	0.0132
95	2.5903	0.0132
96	2.6034	0.0131
97	2.6164	0.0130
98	2.6294	0.0129
99	2.6422	0.0129
100	2.6550	0.0128
101	2.6678	0.0127
102	2.6805	0.0127
103	2.6931	0.0126
104	2.7056	0.0125
105	2.7181	0.0125
106	2.7305	0.0124
107	2.7429	0.0124
108	2.7552	0.0123
109	2.7674	0.0122
110	2.7796	0.0122
111	2.7917	0.0121
112	2.8038	0.0121
113	2.8158	0.0120
114	2.8278	0.0120
115	2.8397	0.0119
116	2.8515	0.0119
117	2.8633	0.0118
118	2.8751	0.0117
119	2.8868	0.0117
120	2.8984	0.0116
121	2.9100	0.0116
122	2.9215	0.0115
123	2.9330	0.0115
124	2.9445	0.0114
125	2.9559	0.0114
126	2.9672	0.0114
127	2.9785	0.0113
128	2.9898	0.0113
129	3.0010	0.0112
130	3.0122	0.0112
131	3.0233	0.0111
132	3.0344	0.0111
133	3.0454	0.0110
134	3.0564	0.0110
135	3.0674	0.0110
136	3.0783	0.0109

137	3.0891	0.0109
138	3.1000	0.0108
139	3.1107	0.0108
140	3.1215	0.0107
141	3.1322	0.0107
142	3.1429	0.0107
143	3.1535	0.0106
144	3.1641	0.0106
145	3.1746	0.0106
146	3.1851	0.0105
147	3.1956	0.0105
148	3.2060	0.0104
149	3.2164	0.0104
150	3.2268	0.0104
151	3.2371	0.0103
152	3.2474	0.0103
153	3.2577	0.0103
154	3.2679	0.0102
155	3.2781	0.0102
156	3.2883	0.0102
157	3.2984	0.0101
158	3.3085	0.0101
159	3.3185	0.0101
160	3.3286	0.0100
161	3.3385	0.0100
162	3.3485	0.0100
163	3.3584	0.0099
164	3.3683	0.0099
165	3.3782	0.0099
166	3.3880	0.0098
167	3.3978	0.0098
168	3.4076	0.0098
169	3.4173	0.0097
170	3.4270	0.0097
171	3.4367	0.0097
172	3.4464	0.0097
173	3.4560	0.0096
174	3.4656	0.0096
175	3.4752	0.0096
176	3.4847	0.0095
177	3.4942	0.0095
178	3.5037	0.0095
179	3.5131	0.0095
180	3.5226	0.0094
181	3.5320	0.0094
182	3.5413	0.0094
183	3.5507	0.0093
184	3.5600	0.0093
185	3.5693	0.0093
186	3.5786	0.0093
187	3.5878	0.0092
188	3.5970	0.0092
189	3.6062	0.0092
190	3.6154	0.0092
191	3.6245	0.0091
192	3.6336	0.0091
193	3.6427	0.0091
194	3.6518	0.0091
195	3.6608	0.0090
196	3.6699	0.0090
197	3.6789	0.0090
198	3.6878	0.0090
199	3.6968	0.0089
200	3.7057	0.0089
201	3.7146	0.0089
202	3.7235	0.0089
203	3.7323	0.0089
204	3.7412	0.0088
205	3.7500	0.0088

206	3.7588	0.0088
207	3.7675	0.0088
208	3.7763	0.0087
209	3.7850	0.0087
210	3.7937	0.0087
211	3.8024	0.0087
212	3.8110	0.0087
213	3.8197	0.0086
214	3.8283	0.0086
215	3.8369	0.0086
216	3.8454	0.0086
217	3.8540	0.0086
218	3.8625	0.0085
219	3.8710	0.0085
220	3.8795	0.0085
221	3.8880	0.0085
222	3.8965	0.0085
223	3.9049	0.0084
224	3.9133	0.0084
225	3.9217	0.0084
226	3.9301	0.0084
227	3.9384	0.0084
228	3.9468	0.0083
229	3.9551	0.0083
230	3.9634	0.0083
231	3.9717	0.0083
232	3.9799	0.0083
233	3.9882	0.0082
234	3.9964	0.0082
235	4.0046	0.0082
236	4.0128	0.0082
237	4.0210	0.0082
238	4.0291	0.0082
239	4.0372	0.0081
240	4.0454	0.0081
241	4.0535	0.0081
242	4.0615	0.0081
243	4.0696	0.0081
244	4.0776	0.0080
245	4.0857	0.0080
246	4.0937	0.0080
247	4.1017	0.0080
248	4.1097	0.0080
249	4.1176	0.0080
250	4.1256	0.0079
251	4.1335	0.0079
252	4.1414	0.0079
253	4.1493	0.0079
254	4.1572	0.0079
255	4.1651	0.0079
256	4.1729	0.0078
257	4.1807	0.0078
258	4.1886	0.0078
259	4.1964	0.0078
260	4.2041	0.0078
261	4.2119	0.0078
262	4.2197	0.0078
263	4.2274	0.0077
264	4.2351	0.0077
265	4.2428	0.0077
266	4.2505	0.0077
267	4.2582	0.0077
268	4.2659	0.0077
269	4.2735	0.0076
270	4.2812	0.0076
271	4.2888	0.0076
272	4.2964	0.0076
273	4.3040	0.0076
274	4.3116	0.0076

275	4.3191	0.0076
276	4.3267	0.0075
277	4.3342	0.0075
278	4.3417	0.0075
279	4.3492	0.0075
280	4.3567	0.0075
281	4.3642	0.0075
282	4.3717	0.0075
283	4.3791	0.0074
284	4.3865	0.0074
285	4.3940	0.0074
286	4.4014	0.0074
287	4.4088	0.0074
288	4.4161	0.0074

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0074	0.0042	0.0032
2	0.0074	0.0042	0.0032
3	0.0074	0.0042	0.0032
4	0.0074	0.0042	0.0032
5	0.0075	0.0042	0.0032
6	0.0075	0.0043	0.0032
7	0.0075	0.0043	0.0032
8	0.0075	0.0043	0.0032
9	0.0075	0.0043	0.0033
10	0.0076	0.0043	0.0033
11	0.0076	0.0043	0.0033
12	0.0076	0.0043	0.0033
13	0.0076	0.0043	0.0033
14	0.0076	0.0044	0.0033
15	0.0077	0.0044	0.0033
16	0.0077	0.0044	0.0033
17	0.0077	0.0044	0.0033
18	0.0077	0.0044	0.0033
19	0.0078	0.0044	0.0033
20	0.0078	0.0044	0.0034
21	0.0078	0.0044	0.0034
22	0.0078	0.0045	0.0034
23	0.0079	0.0045	0.0034
24	0.0079	0.0045	0.0034
25	0.0079	0.0045	0.0034
26	0.0079	0.0045	0.0034
27	0.0080	0.0045	0.0034
28	0.0080	0.0045	0.0034
29	0.0080	0.0046	0.0035
30	0.0080	0.0046	0.0035
31	0.0081	0.0046	0.0035
32	0.0081	0.0046	0.0035
33	0.0081	0.0046	0.0035
34	0.0081	0.0046	0.0035
35	0.0082	0.0046	0.0035
36	0.0082	0.0047	0.0035
37	0.0082	0.0047	0.0035
38	0.0082	0.0047	0.0036
39	0.0083	0.0047	0.0036
40	0.0083	0.0047	0.0036
41	0.0083	0.0047	0.0036
42	0.0084	0.0048	0.0036
43	0.0084	0.0048	0.0036
44	0.0084	0.0048	0.0036
45	0.0085	0.0048	0.0036
46	0.0085	0.0048	0.0037
47	0.0085	0.0048	0.0037
48	0.0085	0.0049	0.0037
49	0.0086	0.0049	0.0037
50	0.0086	0.0049	0.0037

51	0.0086	0.0049	0.0037
52	0.0087	0.0049	0.0037
53	0.0087	0.0050	0.0037
54	0.0087	0.0050	0.0038
55	0.0088	0.0050	0.0038
56	0.0088	0.0050	0.0038
57	0.0088	0.0050	0.0038
58	0.0089	0.0050	0.0038
59	0.0089	0.0051	0.0038
60	0.0089	0.0051	0.0038
61	0.0090	0.0051	0.0039
62	0.0090	0.0051	0.0039
63	0.0090	0.0051	0.0039
64	0.0091	0.0052	0.0039
65	0.0091	0.0052	0.0039
66	0.0091	0.0052	0.0039
67	0.0092	0.0052	0.0040
68	0.0092	0.0052	0.0040
69	0.0093	0.0053	0.0040
70	0.0093	0.0053	0.0040
71	0.0093	0.0053	0.0040
72	0.0094	0.0053	0.0040
73	0.0094	0.0054	0.0041
74	0.0095	0.0054	0.0041
75	0.0095	0.0054	0.0041
76	0.0095	0.0054	0.0041
77	0.0096	0.0055	0.0041
78	0.0096	0.0055	0.0041
79	0.0097	0.0055	0.0042
80	0.0097	0.0055	0.0042
81	0.0098	0.0056	0.0042
82	0.0098	0.0056	0.0042
83	0.0099	0.0056	0.0043
84	0.0099	0.0056	0.0043
85	0.0100	0.0057	0.0043
86	0.0100	0.0057	0.0043
87	0.0101	0.0057	0.0043
88	0.0101	0.0057	0.0043
89	0.0102	0.0058	0.0044
90	0.0102	0.0058	0.0044
91	0.0103	0.0058	0.0044
92	0.0103	0.0059	0.0044
93	0.0104	0.0059	0.0045
94	0.0104	0.0059	0.0045
95	0.0105	0.0060	0.0045
96	0.0105	0.0060	0.0045
97	0.0106	0.0060	0.0046
98	0.0106	0.0060	0.0046
99	0.0107	0.0061	0.0046
100	0.0107	0.0061	0.0046
101	0.0108	0.0062	0.0047
102	0.0109	0.0062	0.0047
103	0.0110	0.0062	0.0047
104	0.0110	0.0063	0.0047
105	0.0111	0.0063	0.0048
106	0.0111	0.0063	0.0048
107	0.0112	0.0064	0.0048
108	0.0113	0.0064	0.0049
109	0.0114	0.0065	0.0049
110	0.0114	0.0065	0.0049
111	0.0115	0.0065	0.0050
112	0.0115	0.0066	0.0050
113	0.0116	0.0066	0.0050
114	0.0117	0.0067	0.0050
115	0.0118	0.0067	0.0051
116	0.0119	0.0067	0.0051
117	0.0120	0.0068	0.0052
118	0.0120	0.0068	0.0052
119	0.0121	0.0069	0.0052

120	0.0122	0.0069	0.0053
121	0.0123	0.0070	0.0053
122	0.0124	0.0070	0.0053
123	0.0125	0.0071	0.0054
124	0.0125	0.0071	0.0054
125	0.0127	0.0072	0.0055
126	0.0127	0.0072	0.0055
127	0.0129	0.0073	0.0055
128	0.0129	0.0074	0.0056
129	0.0131	0.0074	0.0056
130	0.0132	0.0075	0.0057
131	0.0133	0.0076	0.0057
132	0.0134	0.0076	0.0058
133	0.0135	0.0077	0.0058
134	0.0136	0.0077	0.0059
135	0.0138	0.0078	0.0059
136	0.0139	0.0079	0.0060
137	0.0140	0.0080	0.0060
138	0.0141	0.0080	0.0061
139	0.0143	0.0081	0.0062
140	0.0144	0.0082	0.0062
141	0.0146	0.0083	0.0063
142	0.0147	0.0084	0.0063
143	0.0149	0.0085	0.0064
144	0.0150	0.0085	0.0065
145	0.0161	0.0092	0.0069
146	0.0162	0.0092	0.0070
147	0.0164	0.0094	0.0071
148	0.0166	0.0094	0.0071
149	0.0168	0.0096	0.0072
150	0.0169	0.0096	0.0073
151	0.0172	0.0098	0.0074
152	0.0173	0.0099	0.0075
153	0.0176	0.0100	0.0076
154	0.0178	0.0101	0.0077
155	0.0181	0.0103	0.0078
156	0.0182	0.0104	0.0079
157	0.0186	0.0106	0.0080
158	0.0187	0.0107	0.0081
159	0.0191	0.0109	0.0082
160	0.0193	0.0110	0.0083
161	0.0197	0.0112	0.0085
162	0.0199	0.0113	0.0086
163	0.0203	0.0116	0.0088
164	0.0205	0.0117	0.0089
165	0.0210	0.0120	0.0091
166	0.0213	0.0121	0.0092
167	0.0218	0.0124	0.0094
168	0.0221	0.0126	0.0095
169	0.0227	0.0129	0.0098
170	0.0230	0.0131	0.0099
171	0.0237	0.0135	0.0102
172	0.0241	0.0137	0.0104
173	0.0249	0.0141	0.0107
174	0.0253	0.0144	0.0109
175	0.0262	0.0149	0.0113
176	0.0267	0.0152	0.0115
177	0.0278	0.0158	0.0120
178	0.0284	0.0162	0.0122
179	0.0297	0.0169	0.0128
180	0.0305	0.0173	0.0131
181	0.0321	0.0183	0.0138
182	0.0331	0.0188	0.0142
183	0.0352	0.0200	0.0152
184	0.0365	0.0208	0.0157
185	0.0311	0.0177	0.0134
186	0.0329	0.0187	0.0142
187	0.0373	0.0212	0.0161
188	0.0402	0.0229	0.0173

189	0.0485	0.0276	0.0209
190	0.0547	0.0311	0.0236
191	0.0782	0.0392	0.0390
192	0.1076	0.0392	0.0683
193	0.3366	0.0392	0.2974
194	0.0637	0.0363	0.0275
195	0.0438	0.0249	0.0189
196	0.0349	0.0199	0.0150
197	0.0379	0.0216	0.0163
198	0.0341	0.0194	0.0147
199	0.0313	0.0178	0.0135
200	0.0290	0.0165	0.0125
201	0.0272	0.0155	0.0117
202	0.0257	0.0146	0.0111
203	0.0245	0.0139	0.0105
204	0.0234	0.0133	0.0101
205	0.0224	0.0127	0.0096
206	0.0215	0.0123	0.0093
207	0.0208	0.0118	0.0090
208	0.0201	0.0114	0.0087
209	0.0195	0.0111	0.0084
210	0.0189	0.0108	0.0081
211	0.0184	0.0105	0.0079
212	0.0179	0.0102	0.0077
213	0.0175	0.0099	0.0075
214	0.0171	0.0097	0.0074
215	0.0167	0.0095	0.0072
216	0.0163	0.0093	0.0070
217	0.0151	0.0086	0.0065
218	0.0148	0.0084	0.0064
219	0.0145	0.0082	0.0062
220	0.0142	0.0081	0.0061
221	0.0139	0.0079	0.0060
222	0.0137	0.0078	0.0059
223	0.0135	0.0077	0.0058
224	0.0132	0.0075	0.0057
225	0.0130	0.0074	0.0056
226	0.0128	0.0073	0.0055
227	0.0126	0.0072	0.0054
228	0.0124	0.0071	0.0054
229	0.0122	0.0070	0.0053
230	0.0121	0.0069	0.0052
231	0.0119	0.0068	0.0051
232	0.0117	0.0067	0.0051
233	0.0116	0.0066	0.0050
234	0.0114	0.0065	0.0049
235	0.0113	0.0064	0.0049
236	0.0112	0.0064	0.0048
237	0.0110	0.0063	0.0048
238	0.0109	0.0062	0.0047
239	0.0108	0.0061	0.0046
240	0.0107	0.0061	0.0046
241	0.0106	0.0060	0.0045
242	0.0104	0.0059	0.0045
243	0.0103	0.0059	0.0045
244	0.0102	0.0058	0.0044
245	0.0101	0.0058	0.0044
246	0.0100	0.0057	0.0043
247	0.0099	0.0056	0.0043
248	0.0098	0.0056	0.0042
249	0.0097	0.0055	0.0042
250	0.0097	0.0055	0.0042
251	0.0096	0.0054	0.0041
252	0.0095	0.0054	0.0041
253	0.0094	0.0053	0.0041
254	0.0093	0.0053	0.0040
255	0.0092	0.0053	0.0040
256	0.0092	0.0052	0.0039
257	0.0091	0.0052	0.0039

258	0.0090	0.0051	0.0039
259	0.0089	0.0051	0.0039
260	0.0089	0.0051	0.0038
261	0.0088	0.0050	0.0038
262	0.0087	0.0050	0.0038
263	0.0087	0.0049	0.0037
264	0.0086	0.0049	0.0037
265	0.0086	0.0049	0.0037
266	0.0085	0.0048	0.0037
267	0.0084	0.0048	0.0036
268	0.0084	0.0048	0.0036
269	0.0083	0.0047	0.0036
270	0.0083	0.0047	0.0036
271	0.0082	0.0047	0.0035
272	0.0082	0.0046	0.0035
273	0.0081	0.0046	0.0035
274	0.0080	0.0046	0.0035
275	0.0080	0.0046	0.0034
276	0.0079	0.0045	0.0034
277	0.0079	0.0045	0.0034
278	0.0078	0.0045	0.0034
279	0.0078	0.0044	0.0034
280	0.0078	0.0044	0.0033
281	0.0077	0.0044	0.0033
282	0.0077	0.0044	0.0033
283	0.0076	0.0043	0.0033
284	0.0076	0.0043	0.0033
285	0.0075	0.0043	0.0032
286	0.0075	0.0043	0.0032
287	0.0074	0.0042	0.0032
288	0.0074	0.0042	0.0032

Total soil rain loss = 2.33(In)
Total effective rainfall = 2.08(In)
Peak flow rate in flood hydrograph = 11.75(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	5.0	10.0	15.0	20.0
0+ 5	0.0001	0.01	Q				
0+10	0.0006	0.07	Q				
0+15	0.0017	0.16	Q				
0+20	0.0033	0.24	Q				
0+25	0.0052	0.27	Q				
0+30	0.0073	0.30	Q				
0+35	0.0094	0.31	Q				
0+40	0.0117	0.33	Q				
0+45	0.0140	0.34	Q				
0+50	0.0164	0.35	Q				
0+55	0.0189	0.36	Q				
1+ 0	0.0214	0.36	Q				
1+ 5	0.0239	0.37	Q				
1+10	0.0265	0.37	Q				
1+15	0.0291	0.38	Q				
1+20	0.0317	0.38	Q				
1+25	0.0343	0.38	Q				
1+30	0.0370	0.39	Q				
1+35	0.0397	0.39	Q				
1+40	0.0424	0.39	Q				
1+45	0.0451	0.40	QV				
1+50	0.0479	0.40	QV				
1+55	0.0506	0.40	QV				

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2+ 0       0.0534      0.40  QV        |         |         |         |
2+ 5       0.0562      0.40  QV        |         |         |         |
2+10       0.0590      0.40  QV        |         |         |         |
2+15       0.0617      0.41  QV        |         |         |         |
2+20       0.0645      0.41  QV        |         |         |         |
2+25       0.0674      0.41  QV        |         |         |         |
2+30       0.0702      0.41  QV        |         |         |         |
2+35       0.0730      0.41  QV        |         |         |         |
2+40       0.0758      0.41  QV        |         |         |         |
2+45       0.0787      0.41  QV        |         |         |         |
2+50       0.0815      0.41  QV        |         |         |         |
2+55       0.0844      0.42  QV        |         |         |         |
3+ 0       0.0873      0.42  Q V       |         |         |         |
3+ 5       0.0902      0.42  Q V       |         |         |         |
3+10       0.0930      0.42  Q V       |         |         |         |
3+15       0.0959      0.42  Q V       |         |         |         |
3+20       0.0989      0.42  Q V       |         |         |         |
3+25       0.1018      0.42  Q V       |         |         |         |
3+30       0.1047      0.43  Q V       |         |         |         |
3+35       0.1076      0.43  Q V       |         |         |         |
3+40       0.1106      0.43  Q V       |         |         |         |
3+45       0.1136      0.43  Q V       |         |         |         |
3+50       0.1165      0.43  Q V       |         |         |         |
3+55       0.1195      0.43  Q V       |         |         |         |
4+ 0       0.1225      0.43  Q V       |         |         |         |
4+ 5       0.1255      0.44  Q V       |         |         |         |
4+10       0.1285      0.44  Q V       |         |         |         |
4+15       0.1315      0.44  Q  V      |         |         |         |
4+20       0.1346      0.44  Q  V      |         |         |         |
4+25       0.1376      0.44  Q  V      |         |         |         |
4+30       0.1407      0.44  Q  V      |         |         |         |
4+35       0.1437      0.45  Q  V      |         |         |         |
4+40       0.1468      0.45  Q  V      |         |         |         |
4+45       0.1499      0.45  Q  V      |         |         |         |
4+50       0.1530      0.45  Q  V      |         |         |         |
4+55       0.1561      0.45  Q  V      |         |         |         |
5+ 0       0.1592      0.45  Q  V      |         |         |         |
5+ 5       0.1624      0.46  Q  V      |         |         |         |
5+10       0.1655      0.46  Q  V      |         |         |         |
5+15       0.1687      0.46  Q  V      |         |         |         |
5+20       0.1718      0.46  Q   V     |         |         |         |
5+25       0.1750      0.46  Q   V     |         |         |         |
5+30       0.1782      0.46  Q   V     |         |         |         |
5+35       0.1814      0.47  Q   V     |         |         |         |
5+40       0.1846      0.47  Q   V     |         |         |         |
5+45       0.1879      0.47  Q   V     |         |         |         |
5+50       0.1911      0.47  Q   V     |         |         |         |
5+55       0.1944      0.47  Q   V     |         |         |         |
6+ 0       0.1977      0.48  Q   V     |         |         |         |
6+ 5       0.2010      0.48  Q   V     |         |         |         |
6+10       0.2043      0.48  Q   V     |         |         |         |
6+15       0.2076      0.48  Q   V     |         |         |         |
6+20       0.2109      0.48  Q   V     |         |         |         |
6+25       0.2143      0.49  Q   V     |         |         |         |
6+30       0.2176      0.49  Q    V    |         |         |         |
6+35       0.2210      0.49  Q    V    |         |         |         |
6+40       0.2244      0.49  Q    V    |         |         |         |
6+45       0.2278      0.49  Q    V    |         |         |         |
6+50       0.2312      0.50  Q    V    |         |         |         |
6+55       0.2346      0.50  Q    V    |         |         |         |
7+ 0       0.2381      0.50  |Q   V    |         |         |         |
7+ 5       0.2416      0.50  |Q   V    |         |         |         |
7+10       0.2451      0.51  |Q   V    |         |         |         |
7+15       0.2486      0.51  |Q   V    |         |         |         |
7+20       0.2521      0.51  |Q   V    |         |         |         |
7+25       0.2556      0.51  |Q   V    |         |         |         |
7+30       0.2592      0.52  |Q    V   |         |         |         |
7+35       0.2627      0.52  |Q    V   |         |         |         |
7+40       0.2663      0.52  |Q    V   |         |         |         |
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 7+45      0.2699      0.52  |Q    V   |         |         |         |
 7+50      0.2735      0.53  |Q    V   |         |         |         |
 7+55      0.2772      0.53  |Q    V   |         |         |         |
 8+ 0      0.2808      0.53  |Q    V   |         |         |         |
 8+ 5      0.2845      0.53  |Q    V   |         |         |         |
 8+10      0.2882      0.54  |Q    V   |         |         |         |
 8+15      0.2919      0.54  |Q    V   |         |         |         |
 8+20      0.2957      0.54  |Q    V   |         |         |         |
 8+25      0.2994      0.55  |Q    V   |         |         |         |
 8+30      0.3032      0.55  |Q     V  |         |         |         |
 8+35      0.3070      0.55  |Q     V  |         |         |         |
 8+40      0.3108      0.55  |Q     V  |         |         |         |
 8+45      0.3147      0.56  |Q     V  |         |         |         |
 8+50      0.3185      0.56  |Q     V  |         |         |         |
 8+55      0.3224      0.56  |Q     V  |         |         |         |
 9+ 0      0.3263      0.57  |Q     V  |         |         |         |
 9+ 5      0.3303      0.57  |Q     V  |         |         |         |
 9+10      0.3342      0.57  |Q     V  |         |         |         |
 9+15      0.3382      0.58  |Q     V  |         |         |         |
 9+20      0.3422      0.58  |Q     V  |         |         |         |
 9+25      0.3462      0.58  |Q      V |         |         |         |
 9+30      0.3503      0.59  |Q      V |         |         |         |
 9+35      0.3544      0.59  |Q      V |         |         |         |
 9+40      0.3585      0.60  |Q      V |         |         |         |
 9+45      0.3626      0.60  |Q      V |         |         |         |
 9+50      0.3667      0.60  |Q      V |         |         |         |
 9+55      0.3709      0.61  |Q      V |         |         |         |
10+ 0      0.3751      0.61  |Q      V |         |         |         |
10+ 5      0.3794      0.62  |Q      V |         |         |         |
10+10      0.3837      0.62  |Q      V |         |         |         |
10+15      0.3880      0.62  |Q       V|         |         |         |
10+20      0.3923      0.63  |Q       V|         |         |         |
10+25      0.3967      0.63  |Q       V|         |         |         |
10+30      0.4011      0.64  |Q       V|         |         |         |
10+35      0.4055      0.64  |Q       V|         |         |         |
10+40      0.4100      0.65  |Q       V|         |         |         |
10+45      0.4144      0.65  |Q       V|         |         |         |
10+50      0.4190      0.66  |Q       V|         |         |         |
10+55      0.4235      0.66  |Q       V|         |         |         |
11+ 0      0.4281      0.67  |Q       V|         |         |         |
11+ 5      0.4328      0.67  |Q        V         |         |         |
11+10      0.4375      0.68  |Q        V         |         |         |
11+15      0.4422      0.69  |Q        V         |         |         |
11+20      0.4469      0.69  |Q        V         |         |         |
11+25      0.4517      0.70  |Q        V         |         |         |
11+30      0.4566      0.70  |Q        V         |         |         |
11+35      0.4615      0.71  |Q        V         |         |         |
11+40      0.4664      0.72  |Q        V         |         |         |
11+45      0.4714      0.72  |Q        V         |         |         |
11+50      0.4764      0.73  |Q        |V        |         |         |
11+55      0.4815      0.74  |Q        |V        |         |         |
12+ 0      0.4866      0.74  |Q        |V        |         |         |
12+ 5      0.4918      0.75  |Q        |V        |         |         |
12+10      0.4971      0.77  |Q        |V        |         |         |
12+15      0.5025      0.79  |Q        |V        |         |         |
12+20      0.5080      0.80  |Q        |V        |         |         |
12+25      0.5136      0.82  |Q        |V        |         |         |
12+30      0.5193      0.83  |Q        | V       |         |         |
12+35      0.5251      0.84  |Q        | V       |         |         |
12+40      0.5310      0.85  |Q        | V       |         |         |
12+45      0.5369      0.86  |Q        | V       |         |         |
12+50      0.5429      0.87  |Q        | V       |         |         |
12+55      0.5490      0.88  |Q        | V       |         |         |
13+ 0      0.5551      0.89  |Q        | V       |         |         |
13+ 5      0.5613      0.91  |Q        |  V      |         |         |
13+10      0.5677      0.92  |Q        |  V      |         |         |
13+15      0.5741      0.93  |Q        |  V      |         |         |
13+20      0.5805      0.94  |Q        |  V      |         |         |
13+25      0.5871      0.96  |Q        |  V      |         |         |
```

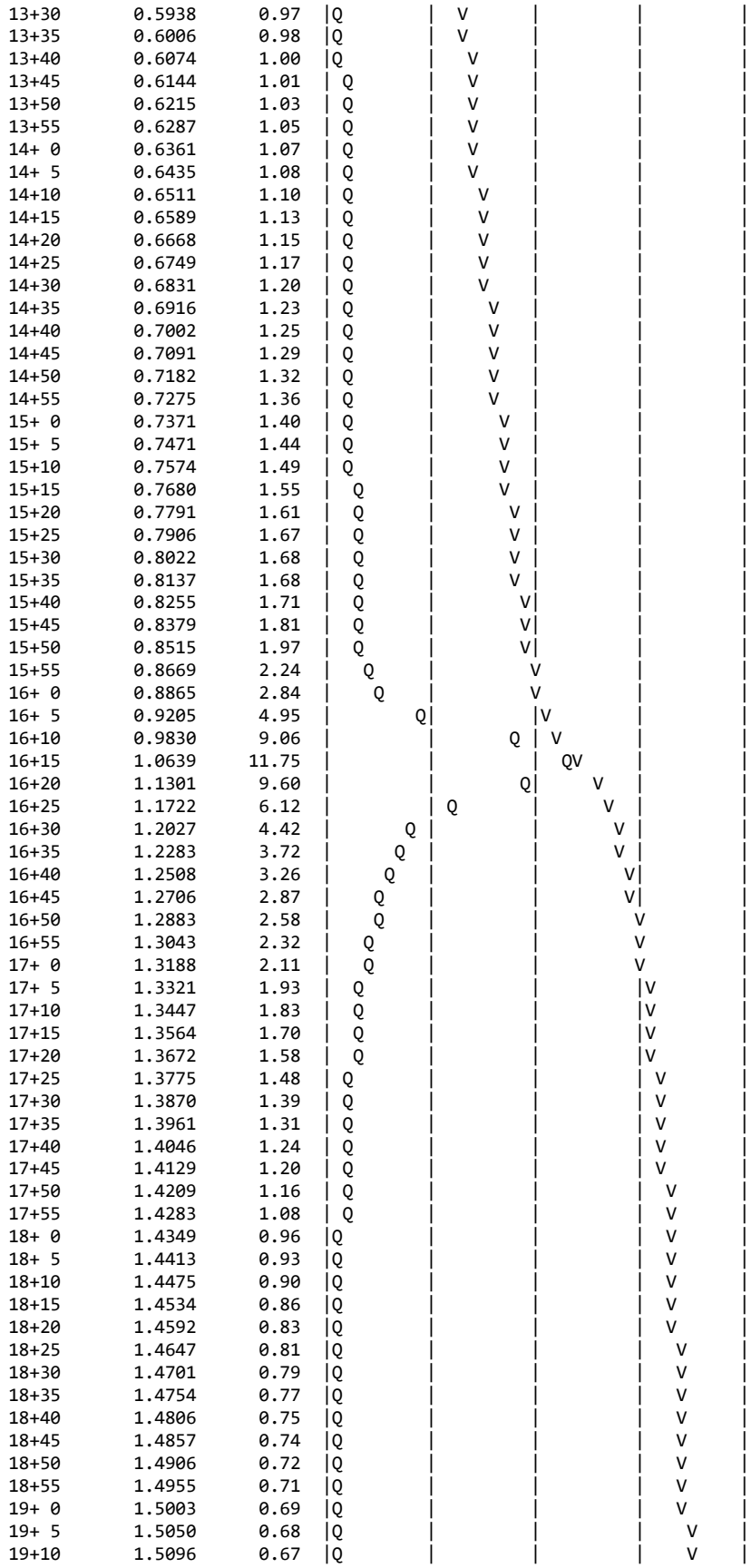

```
19+15       1.5141      0.66  |Q        |         |         |    V    |
19+20       1.5186      0.65  |Q        |         |         |    V    |
19+25       1.5230      0.64  |Q        |         |         |    V    |
19+30       1.5273      0.63  |Q        |         |         |    V    |
19+35       1.5316      0.62  |Q        |         |         |    V    |
19+40       1.5358      0.61  |Q        |         |         |    V    |
19+45       1.5400      0.60  |Q        |         |         |    V    |
19+50       1.5441      0.59  |Q        |         |         |    V    |
19+55       1.5481      0.59  |Q        |         |         |     V   |
20+ 0       1.5521      0.58  |Q        |         |         |     V   |
20+ 5       1.5560      0.57  |Q        |         |         |     V   |
20+10       1.5599      0.57  |Q        |         |         |     V   |
20+15       1.5638      0.56  |Q        |         |         |     V   |
20+20       1.5676      0.55  |Q        |         |         |     V   |
20+25       1.5714      0.55  |Q        |         |         |     V   |
20+30       1.5751      0.54  |Q        |         |         |     V   |
20+35       1.5788      0.54  |Q        |         |         |     V   |
20+40       1.5824      0.53  |Q        |         |         |     V   |
20+45       1.5861      0.52  |Q        |         |         |     V   |
20+50       1.5896      0.52  |Q        |         |         |      V  |
20+55       1.5932      0.51  |Q        |         |         |      V  |
21+ 0       1.5967      0.51  |Q        |         |         |      V  |
21+ 5       1.6002      0.50  |Q        |         |         |      V  |
21+10       1.6036      0.50  |Q        |         |         |      V  |
21+15       1.6070      0.50  Q         |         |         |      V  |
21+20       1.6104      0.49  Q         |         |         |      V  |
21+25       1.6137      0.49  Q         |         |         |      V  |
21+30       1.6171      0.48  Q         |         |         |      V  |
21+35       1.6204      0.48  Q         |         |         |      V  |
21+40       1.6236      0.47  Q         |         |         |      V  |
21+45       1.6269      0.47  Q         |         |         |      V  |
21+50       1.6301      0.47  Q         |         |         |      V  |
21+55       1.6333      0.46  Q         |         |         |       V |
22+ 0       1.6364      0.46  Q         |         |         |       V |
22+ 5       1.6396      0.46  Q         |         |         |       V |
22+10       1.6427      0.45  Q         |         |         |       V |
22+15       1.6458      0.45  Q         |         |         |       V |
22+20       1.6489      0.45  Q         |         |         |       V |
22+25       1.6519      0.44  Q         |         |         |       V |
22+30       1.6549      0.44  Q         |         |         |       V |
22+35       1.6579      0.44  Q         |         |         |       V |
22+40       1.6609      0.43  Q         |         |         |       V |
22+45       1.6639      0.43  Q         |         |         |       V |
22+50       1.6668      0.43  Q         |         |         |       V |
22+55       1.6697      0.42  Q         |         |         |       V |
23+ 0       1.6727      0.42  Q         |         |         |       V |
23+ 5       1.6755      0.42  Q         |         |         |        V|
23+10       1.6784      0.42  Q         |         |         |        V|
23+15       1.6813      0.41  Q         |         |         |        V|
23+20       1.6841      0.41  Q         |         |         |        V|
23+25       1.6869      0.41  Q         |         |         |        V|
23+30       1.6897      0.41  Q         |         |         |        V|
23+35       1.6925      0.40  Q         |         |         |        V|
23+40       1.6952      0.40  Q         |         |         |        V|
23+45       1.6980      0.40  Q         |         |         |        V|
23+50       1.7007      0.40  Q         |         |         |        V|
23+55       1.7034      0.39  Q         |         |         |        V|
24+ 0       1.7061      0.39  Q         |         |         |        V|
24+ 5       1.7087      0.38  Q         |         |         |        V|
24+10       1.7109      0.32  Q         |         |         |        V|
24+15       1.7124      0.22  Q         |         |         |        V|
24+20       1.7134      0.15  Q         |         |         |        V|
24+25       1.7142      0.11  Q         |         |         |        V|
24+30       1.7148      0.09  Q         |         |         |        V|
24+35       1.7153      0.07  Q         |         |         |        V|
24+40       1.7157      0.06  Q         |         |         |        V|
24+45       1.7160      0.05  Q         |         |         |        V|
24+50       1.7163      0.04  Q         |         |         |        V|
24+55       1.7165      0.03  Q         |         |         |        V|
```

```
   25+ 0       1.7167      0.03  Q        |         |         |        V|
   25+ 5       1.7169      0.02  Q        |         |         |        V|
   25+10       1.7170      0.02  Q        |         |         |        V|
   25+15       1.7171      0.01  Q        |         |         |        V|
   25+20       1.7172      0.01  Q        |         |         |        V|
   25+25       1.7172      0.01  Q        |         |         |        V|
   25+30       1.7173      0.01  Q        |         |         |        V|
   25+35       1.7173      0.01  Q        |         |         |        V|
   25+40       1.7173      0.00  Q        |         |         |        V|
   25+45       1.7174      0.00  Q        |         |         |        V|
   25+50       1.7174      0.00  Q        |         |         |        V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Study date 04/15/24

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

Program License Serial Number 6320

204742 ROUTE 66 TRUCK TERMINAL
EXISTING CONDITIONS AREA "A"
25-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-15-24

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 (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10	9.90	1	0.91
Rainfall data for year 2	9.90	6	1.58
Rainfall data for year 2	9.90	24	2.75
Rainfall data for year 100	9.90	1	1.31
Rainfall data for year 100	9.90	6	3.25
Rainfall data for year 100	9.90	24	6.80

++

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

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
73.0	73.0	9.90	1.000	0.485	0.970	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 (AMC2)	S	Pervious Yield Fr
9.60	0.970	73.0	73.0	3.70	0.479
0.30	0.030	98.0	98.0	0.20	0.956

Area-averaged catchment yield fraction, Y = 0.493
Area-averaged low loss fraction, Yb = 0.507
User entry of time of concentration = 0.290 (hours)
++
Watershed area = 9.90(Ac.)
Catchment Lag time = 0.232 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.9195
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.471(In/Hr)
Average low loss rate fraction (Yb) = 0.507 (decimal)
VALLEY UNDEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.396(In)
Computed peak 30-minute rainfall = 0.810(In)
Specified peak 1-hour rainfall = 1.069(In)
Computed peak 3-hour rainfall = 1.869(In)
Specified peak 6-hour rainfall = 2.658(In)
Specified peak 24-hour rainfall = 5.365(In)

Rainfall depth area reduction factors:
Using a total area of 9.90(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.396(In)
30-minute factor = 1.000 Adjusted rainfall = 0.810(In)
1-hour factor = 1.000 Adjusted rainfall = 1.069(In)
3-hour factor = 1.000 Adjusted rainfall = 1.869(In)
6-hour factor = 1.000 Adjusted rainfall = 2.658(In)
24-hour factor = 1.000 Adjusted rainfall = 5.365(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 = 119.73 (CFS))	
1	3.719	4.453
2	18.479	17.671
3	42.496	28.755
4	61.763	23.068
5	71.755	11.963
6	77.545	6.932
7	81.822	5.122
8	85.173	4.012
9	87.792	3.136
10	89.955	2.590
11	91.695	2.083
12	93.114	1.700
13	94.260	1.371
14	95.346	1.301
15	96.258	1.092
16	97.015	0.905
17	97.662	0.775
18	98.200	0.645
19	98.644	0.532
20	99.004	0.431
21	99.364	0.430
22	99.723	0.430
23	100.000	0.332

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.3955	0.3955
2	0.5219	0.1264
3	0.6138	0.0919
4	0.6887	0.0749
5	0.7529	0.0643
6	0.8099	0.0570
7	0.8614	0.0515
8	0.9087	0.0473
9	0.9525	0.0438
10	0.9935	0.0410
11	1.0321	0.0386
12	1.0687	0.0366
13	1.1131	0.0444
14	1.1559	0.0428
15	1.1971	0.0413
16	1.2371	0.0400
17	1.2758	0.0387
18	1.3135	0.0376
19	1.3501	0.0366
20	1.3858	0.0357
21	1.4206	0.0348
22	1.4546	0.0340
23	1.4879	0.0333
24	1.5205	0.0326
25	1.5524	0.0319
26	1.5836	0.0313
27	1.6143	0.0307
28	1.6445	0.0301
29	1.6741	0.0296
30	1.7032	0.0291
31	1.7319	0.0286
32	1.7601	0.0282
33	1.7878	0.0278
34	1.8152	0.0274
35	1.8421	0.0270
36	1.8687	0.0266
37	1.8949	0.0262
38	1.9208	0.0259
39	1.9463	0.0255
40	1.9716	0.0252
41	1.9965	0.0249
42	2.0211	0.0246
43	2.0454	0.0243
44	2.0694	0.0240
45	2.0932	0.0238
46	2.1167	0.0235
47	2.1400	0.0233
48	2.1630	0.0230
49	2.1858	0.0228
50	2.2084	0.0226
51	2.2307	0.0223
52	2.2528	0.0221
53	2.2748	0.0219
54	2.2965	0.0217
55	2.3180	0.0215
56	2.3393	0.0213
57	2.3605	0.0211
58	2.3814	0.0210
59	2.4022	0.0208
60	2.4228	0.0206
61	2.4433	0.0204
62	2.4636	0.0203
63	2.4837	0.0201
64	2.5036	0.0200
65	2.5235	0.0198
66	2.5431	0.0197
67	2.5626	0.0195

68	2.5820	0.0194
69	2.6012	0.0192
70	2.6203	0.0191
71	2.6393	0.0190
72	2.6581	0.0188
73	2.6768	0.0186
74	2.6953	0.0185
75	2.7137	0.0184
76	2.7319	0.0183
77	2.7501	0.0181
78	2.7681	0.0180
79	2.7860	0.0179
80	2.8038	0.0178
81	2.8215	0.0177
82	2.8391	0.0176
83	2.8566	0.0175
84	2.8740	0.0174
85	2.8913	0.0173
86	2.9085	0.0172
87	2.9255	0.0171
88	2.9425	0.0170
89	2.9594	0.0169
90	2.9762	0.0168
91	2.9929	0.0167
92	3.0095	0.0166
93	3.0261	0.0165
94	3.0425	0.0164
95	3.0589	0.0164
96	3.0751	0.0163
97	3.0913	0.0162
98	3.1074	0.0161
99	3.1234	0.0160
100	3.1394	0.0159
101	3.1552	0.0159
102	3.1710	0.0158
103	3.1867	0.0157
104	3.2024	0.0156
105	3.2179	0.0156
106	3.2334	0.0155
107	3.2488	0.0154
108	3.2642	0.0153
109	3.2795	0.0153
110	3.2947	0.0152
111	3.3098	0.0151
112	3.3249	0.0151
113	3.3399	0.0150
114	3.3548	0.0149
115	3.3697	0.0149
116	3.3845	0.0148
117	3.3992	0.0147
118	3.4139	0.0147
119	3.4286	0.0146
120	3.4431	0.0146
121	3.4576	0.0145
122	3.4721	0.0144
123	3.4865	0.0144
124	3.5008	0.0143
125	3.5151	0.0143
126	3.5293	0.0142
127	3.5434	0.0142
128	3.5575	0.0141
129	3.5716	0.0141
130	3.5856	0.0140
131	3.5995	0.0139
132	3.6134	0.0139
133	3.6273	0.0138
134	3.6411	0.0138
135	3.6548	0.0137
136	3.6685	0.0137

137	3.6821	0.0136
138	3.6957	0.0136
139	3.7093	0.0135
140	3.7228	0.0135
141	3.7362	0.0134
142	3.7496	0.0134
143	3.7630	0.0134
144	3.7763	0.0133
145	3.7895	0.0133
146	3.8027	0.0132
147	3.8159	0.0132
148	3.8290	0.0131
149	3.8421	0.0131
150	3.8552	0.0130
151	3.8682	0.0130
152	3.8811	0.0130
153	3.8940	0.0129
154	3.9069	0.0129
155	3.9197	0.0128
156	3.9325	0.0128
157	3.9453	0.0127
158	3.9580	0.0127
159	3.9706	0.0127
160	3.9833	0.0126
161	3.9959	0.0126
162	4.0084	0.0126
163	4.0209	0.0125
164	4.0334	0.0125
165	4.0459	0.0124
166	4.0583	0.0124
167	4.0706	0.0124
168	4.0830	0.0123
169	4.0952	0.0123
170	4.1075	0.0123
171	4.1197	0.0122
172	4.1319	0.0122
173	4.1441	0.0122
174	4.1562	0.0121
175	4.1683	0.0121
176	4.1803	0.0120
177	4.1923	0.0120
178	4.2043	0.0120
179	4.2163	0.0119
180	4.2282	0.0119
181	4.2400	0.0119
182	4.2519	0.0119
183	4.2637	0.0118
184	4.2755	0.0118
185	4.2873	0.0118
186	4.2990	0.0117
187	4.3107	0.0117
188	4.3223	0.0117
189	4.3340	0.0116
190	4.3456	0.0116
191	4.3571	0.0116
192	4.3687	0.0115
193	4.3802	0.0115
194	4.3917	0.0115
195	4.4031	0.0115
196	4.4145	0.0114
197	4.4259	0.0114
198	4.4373	0.0114
199	4.4486	0.0113
200	4.4600	0.0113
201	4.4712	0.0113
202	4.4825	0.0113
203	4.4937	0.0112
204	4.5049	0.0112
205	4.5161	0.0112

206	4.5272	0.0111
207	4.5384	0.0111
208	4.5494	0.0111
209	4.5605	0.0111
210	4.5716	0.0110
211	4.5826	0.0110
212	4.5936	0.0110
213	4.6045	0.0110
214	4.6155	0.0109
215	4.6264	0.0109
216	4.6373	0.0109
217	4.6481	0.0109
218	4.6590	0.0108
219	4.6698	0.0108
220	4.6806	0.0108
221	4.6913	0.0108
222	4.7021	0.0107
223	4.7128	0.0107
224	4.7235	0.0107
225	4.7341	0.0107
226	4.7448	0.0106
227	4.7554	0.0106
228	4.7660	0.0106
229	4.7766	0.0106
230	4.7871	0.0106
231	4.7977	0.0105
232	4.8082	0.0105
233	4.8187	0.0105
234	4.8291	0.0105
235	4.8396	0.0104
236	4.8500	0.0104
237	4.8604	0.0104
238	4.8708	0.0104
239	4.8811	0.0104
240	4.8915	0.0103
241	4.9018	0.0103
242	4.9121	0.0103
243	4.9224	0.0103
244	4.9326	0.0103
245	4.9428	0.0102
246	4.9530	0.0102
247	4.9632	0.0102
248	4.9734	0.0102
249	4.9835	0.0101
250	4.9937	0.0101
251	5.0038	0.0101
252	5.0139	0.0101
253	5.0239	0.0101
254	5.0340	0.0100
255	5.0440	0.0100
256	5.0540	0.0100
257	5.0640	0.0100
258	5.0740	0.0100
259	5.0839	0.0100
260	5.0939	0.0099
261	5.1038	0.0099
262	5.1137	0.0099
263	5.1236	0.0099
264	5.1334	0.0099
265	5.1433	0.0098
266	5.1531	0.0098
267	5.1629	0.0098
268	5.1727	0.0098
269	5.1824	0.0098
270	5.1922	0.0098
271	5.2019	0.0097
272	5.2116	0.0097
273	5.2213	0.0097
274	5.2310	0.0097

275	5.2407	0.0097
276	5.2503	0.0096
277	5.2600	0.0096
278	5.2696	0.0096
279	5.2792	0.0096
280	5.2887	0.0096
281	5.2983	0.0096
282	5.3078	0.0095
283	5.3174	0.0095
284	5.3269	0.0095
285	5.3364	0.0095
286	5.3458	0.0095
287	5.3553	0.0095
288	5.3647	0.0094

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0094	0.0048	0.0047
2	0.0095	0.0048	0.0047
3	0.0095	0.0048	0.0047
4	0.0095	0.0048	0.0047
5	0.0095	0.0048	0.0047
6	0.0096	0.0048	0.0047
7	0.0096	0.0049	0.0047
8	0.0096	0.0049	0.0047
9	0.0096	0.0049	0.0048
10	0.0097	0.0049	0.0048
11	0.0097	0.0049	0.0048
12	0.0097	0.0049	0.0048
13	0.0098	0.0049	0.0048
14	0.0098	0.0049	0.0048
15	0.0098	0.0050	0.0048
16	0.0098	0.0050	0.0048
17	0.0099	0.0050	0.0049
18	0.0099	0.0050	0.0049
19	0.0099	0.0050	0.0049
20	0.0099	0.0050	0.0049
21	0.0100	0.0051	0.0049
22	0.0100	0.0051	0.0049
23	0.0100	0.0051	0.0049
24	0.0100	0.0051	0.0050
25	0.0101	0.0051	0.0050
26	0.0101	0.0051	0.0050
27	0.0101	0.0051	0.0050
28	0.0102	0.0052	0.0050
29	0.0102	0.0052	0.0050
30	0.0102	0.0052	0.0050
31	0.0103	0.0052	0.0051
32	0.0103	0.0052	0.0051
33	0.0103	0.0052	0.0051
34	0.0104	0.0052	0.0051
35	0.0104	0.0053	0.0051
36	0.0104	0.0053	0.0051
37	0.0105	0.0053	0.0052
38	0.0105	0.0053	0.0052
39	0.0105	0.0053	0.0052
40	0.0106	0.0053	0.0052
41	0.0106	0.0054	0.0052
42	0.0106	0.0054	0.0052
43	0.0107	0.0054	0.0053
44	0.0107	0.0054	0.0053
45	0.0107	0.0054	0.0053
46	0.0108	0.0055	0.0053
47	0.0108	0.0055	0.0053
48	0.0108	0.0055	0.0053
49	0.0109	0.0055	0.0054
50	0.0109	0.0055	0.0054

51	0.0110	0.0056	0.0054
52	0.0110	0.0056	0.0054
53	0.0110	0.0056	0.0054
54	0.0111	0.0056	0.0055
55	0.0111	0.0056	0.0055
56	0.0111	0.0056	0.0055
57	0.0112	0.0057	0.0055
58	0.0112	0.0057	0.0055
59	0.0113	0.0057	0.0056
60	0.0113	0.0057	0.0056
61	0.0114	0.0058	0.0056
62	0.0114	0.0058	0.0056
63	0.0115	0.0058	0.0056
64	0.0115	0.0058	0.0057
65	0.0115	0.0058	0.0057
66	0.0116	0.0059	0.0057
67	0.0116	0.0059	0.0057
68	0.0117	0.0059	0.0058
69	0.0117	0.0059	0.0058
70	0.0118	0.0060	0.0058
71	0.0118	0.0060	0.0058
72	0.0119	0.0060	0.0058
73	0.0119	0.0060	0.0059
74	0.0119	0.0061	0.0059
75	0.0120	0.0061	0.0059
76	0.0120	0.0061	0.0059
77	0.0121	0.0061	0.0060
78	0.0122	0.0062	0.0060
79	0.0122	0.0062	0.0060
80	0.0123	0.0062	0.0060
81	0.0123	0.0062	0.0061
82	0.0124	0.0063	0.0061
83	0.0124	0.0063	0.0061
84	0.0125	0.0063	0.0062
85	0.0126	0.0064	0.0062
86	0.0126	0.0064	0.0062
87	0.0127	0.0064	0.0063
88	0.0127	0.0064	0.0063
89	0.0128	0.0065	0.0063
90	0.0128	0.0065	0.0063
91	0.0129	0.0065	0.0064
92	0.0130	0.0066	0.0064
93	0.0130	0.0066	0.0064
94	0.0131	0.0066	0.0065
95	0.0132	0.0067	0.0065
96	0.0132	0.0067	0.0065
97	0.0133	0.0067	0.0066
98	0.0134	0.0068	0.0066
99	0.0134	0.0068	0.0066
100	0.0135	0.0068	0.0067
101	0.0136	0.0069	0.0067
102	0.0136	0.0069	0.0067
103	0.0137	0.0070	0.0068
104	0.0138	0.0070	0.0068
105	0.0139	0.0070	0.0069
106	0.0139	0.0071	0.0069
107	0.0141	0.0071	0.0069
108	0.0141	0.0071	0.0070
109	0.0142	0.0072	0.0070
110	0.0143	0.0072	0.0070
111	0.0144	0.0073	0.0071
112	0.0144	0.0073	0.0071
113	0.0146	0.0074	0.0072
114	0.0146	0.0074	0.0072
115	0.0147	0.0075	0.0073
116	0.0148	0.0075	0.0073
117	0.0149	0.0076	0.0074
118	0.0150	0.0076	0.0074
119	0.0151	0.0077	0.0075

120	0.0152	0.0077	0.0075
121	0.0153	0.0078	0.0076
122	0.0154	0.0078	0.0076
123	0.0156	0.0079	0.0077
124	0.0156	0.0079	0.0077
125	0.0158	0.0080	0.0078
126	0.0159	0.0080	0.0078
127	0.0160	0.0081	0.0079
128	0.0161	0.0082	0.0079
129	0.0163	0.0082	0.0080
130	0.0164	0.0083	0.0081
131	0.0165	0.0084	0.0082
132	0.0166	0.0084	0.0082
133	0.0168	0.0085	0.0083
134	0.0169	0.0086	0.0083
135	0.0171	0.0087	0.0084
136	0.0172	0.0087	0.0085
137	0.0174	0.0088	0.0086
138	0.0175	0.0089	0.0086
139	0.0177	0.0090	0.0087
140	0.0178	0.0090	0.0088
141	0.0180	0.0091	0.0089
142	0.0181	0.0092	0.0090
143	0.0184	0.0093	0.0091
144	0.0185	0.0094	0.0091
145	0.0188	0.0095	0.0093
146	0.0190	0.0096	0.0094
147	0.0192	0.0097	0.0095
148	0.0194	0.0098	0.0096
149	0.0197	0.0100	0.0097
150	0.0198	0.0100	0.0098
151	0.0201	0.0102	0.0099
152	0.0203	0.0103	0.0100
153	0.0206	0.0104	0.0102
154	0.0208	0.0105	0.0103
155	0.0211	0.0107	0.0104
156	0.0213	0.0108	0.0105
157	0.0217	0.0110	0.0107
158	0.0219	0.0111	0.0108
159	0.0223	0.0113	0.0110
160	0.0226	0.0114	0.0111
161	0.0230	0.0117	0.0114
162	0.0233	0.0118	0.0115
163	0.0238	0.0120	0.0117
164	0.0240	0.0122	0.0119
165	0.0246	0.0125	0.0121
166	0.0249	0.0126	0.0123
167	0.0255	0.0129	0.0126
168	0.0259	0.0131	0.0128
169	0.0266	0.0135	0.0131
170	0.0270	0.0137	0.0133
171	0.0278	0.0141	0.0137
172	0.0282	0.0143	0.0139
173	0.0291	0.0148	0.0144
174	0.0296	0.0150	0.0146
175	0.0307	0.0156	0.0151
176	0.0313	0.0158	0.0154
177	0.0326	0.0165	0.0161
178	0.0333	0.0169	0.0164
179	0.0348	0.0176	0.0172
180	0.0357	0.0181	0.0176
181	0.0376	0.0191	0.0186
182	0.0387	0.0196	0.0191
183	0.0413	0.0209	0.0204
184	0.0428	0.0217	0.0211
185	0.0366	0.0185	0.0180
186	0.0386	0.0196	0.0190
187	0.0438	0.0222	0.0216
188	0.0473	0.0239	0.0233

189	0.0570	0.0289	0.0281
190	0.0643	0.0326	0.0317
191	0.0919	0.0392	0.0527
192	0.1264	0.0392	0.0872
193	0.3955	0.0392	0.3563
194	0.0749	0.0379	0.0369
195	0.0515	0.0261	0.0254
196	0.0410	0.0208	0.0202
197	0.0444	0.0225	0.0219
198	0.0400	0.0202	0.0197
199	0.0366	0.0186	0.0181
200	0.0340	0.0172	0.0168
201	0.0319	0.0162	0.0157
202	0.0301	0.0153	0.0149
203	0.0286	0.0145	0.0141
204	0.0274	0.0139	0.0135
205	0.0262	0.0133	0.0129
206	0.0252	0.0128	0.0124
207	0.0243	0.0123	0.0120
208	0.0235	0.0119	0.0116
209	0.0228	0.0115	0.0112
210	0.0221	0.0112	0.0109
211	0.0215	0.0109	0.0106
212	0.0210	0.0106	0.0103
213	0.0204	0.0104	0.0101
214	0.0200	0.0101	0.0098
215	0.0195	0.0099	0.0096
216	0.0191	0.0097	0.0094
217	0.0186	0.0094	0.0092
218	0.0183	0.0093	0.0090
219	0.0179	0.0091	0.0088
220	0.0176	0.0089	0.0087
221	0.0173	0.0088	0.0085
222	0.0170	0.0086	0.0084
223	0.0167	0.0085	0.0082
224	0.0164	0.0083	0.0081
225	0.0162	0.0082	0.0080
226	0.0159	0.0081	0.0079
227	0.0157	0.0080	0.0078
228	0.0155	0.0078	0.0076
229	0.0153	0.0077	0.0075
230	0.0151	0.0076	0.0074
231	0.0149	0.0075	0.0073
232	0.0147	0.0074	0.0072
233	0.0145	0.0073	0.0072
234	0.0143	0.0073	0.0071
235	0.0142	0.0072	0.0070
236	0.0140	0.0071	0.0069
237	0.0138	0.0070	0.0068
238	0.0137	0.0069	0.0068
239	0.0135	0.0069	0.0067
240	0.0134	0.0068	0.0066
241	0.0133	0.0067	0.0065
242	0.0131	0.0067	0.0065
243	0.0130	0.0066	0.0064
244	0.0129	0.0065	0.0064
245	0.0127	0.0065	0.0063
246	0.0126	0.0064	0.0062
247	0.0125	0.0063	0.0062
248	0.0124	0.0063	0.0061
249	0.0123	0.0062	0.0061
250	0.0122	0.0062	0.0060
251	0.0121	0.0061	0.0060
252	0.0120	0.0061	0.0059
253	0.0119	0.0060	0.0059
254	0.0118	0.0060	0.0058
255	0.0117	0.0059	0.0058
256	0.0116	0.0059	0.0057
257	0.0115	0.0058	0.0057

258	0.0114	0.0058	0.0056
259	0.0113	0.0057	0.0056
260	0.0113	0.0057	0.0056
261	0.0112	0.0057	0.0055
262	0.0111	0.0056	0.0055
263	0.0110	0.0056	0.0054
264	0.0109	0.0055	0.0054
265	0.0109	0.0055	0.0054
266	0.0108	0.0055	0.0053
267	0.0107	0.0054	0.0053
268	0.0106	0.0054	0.0053
269	0.0106	0.0054	0.0052
270	0.0105	0.0053	0.0052
271	0.0104	0.0053	0.0052
272	0.0104	0.0053	0.0051
273	0.0103	0.0052	0.0051
274	0.0103	0.0052	0.0051
275	0.0102	0.0052	0.0050
276	0.0101	0.0051	0.0050
277	0.0101	0.0051	0.0050
278	0.0100	0.0051	0.0049
279	0.0100	0.0050	0.0049
280	0.0099	0.0050	0.0049
281	0.0098	0.0050	0.0049
282	0.0098	0.0050	0.0048
283	0.0097	0.0049	0.0048
284	0.0097	0.0049	0.0048
285	0.0096	0.0049	0.0047
286	0.0096	0.0049	0.0047
287	0.0095	0.0048	0.0047
288	0.0095	0.0048	0.0047

Total soil rain loss = 2.52(In)
Total effective rainfall = 2.84(In)
Peak flow rate in flood hydrograph = 14.45(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	5.0	10.0	15.0	20.0
0+ 5	0.0001	0.02	Q	|	|	|	|
0+10	0.0009	0.10	Q	|	|	|	|
0+15	0.0025	0.24	Q	|	|	|	|
0+20	0.0049	0.35	Q	|	|	|	|
0+25	0.0076	0.40	Q	|	|	|	|
0+30	0.0106	0.44	Q	|	|	|	|
0+35	0.0138	0.46	Q	|	|	|	|
0+40	0.0171	0.48	Q	|	|	|	|
0+45	0.0205	0.50	Q	|	|	|	|
0+50	0.0240	0.51	VQ	|	|	|	|
0+55	0.0276	0.52	VQ	|	|	|	|
1+ 0	0.0313	0.53	VQ	|	|	|	|
1+ 5	0.0350	0.54	VQ	|	|	|	|
1+10	0.0387	0.55	VQ	|	|	|	|
1+15	0.0425	0.55	VQ	|	|	|	|
1+20	0.0464	0.56	VQ	|	|	|	|
1+25	0.0502	0.56	VQ	|	|	|	|
1+30	0.0541	0.57	VQ	|	|	|	|
1+35	0.0581	0.57	VQ	|	|	|	|
1+40	0.0620	0.57	|Q	|	|	|	|
1+45	0.0660	0.58	|Q	|	|	|	|
1+50	0.0700	0.58	|Q	|	|	|	|
1+55	0.0740	0.59	|Q	|	|	|	|

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2+ 0       0.0781      0.59  |Q        |         |         |         |
2+ 5       0.0821      0.59  |Q        |         |         |         |
2+10       0.0862      0.59  |Q        |         |         |         |
2+15       0.0903      0.59  |Q        |         |         |         |
2+20       0.0944      0.59  |Q        |         |         |         |
2+25       0.0985      0.60  |Q        |         |         |         |
2+30       0.1026      0.60  |Q        |         |         |         |
2+35       0.1067      0.60  |Q        |         |         |         |
2+40       0.1108      0.60  |Q        |         |         |         |
2+45       0.1150      0.60  |Q        |         |         |         |
2+50       0.1192      0.60  |QV       |         |         |         |
2+55       0.1233      0.61  |QV       |         |         |         |
3+ 0       0.1275      0.61  |QV       |         |         |         |
3+ 5       0.1317      0.61  |QV       |         |         |         |
3+10       0.1359      0.61  |QV       |         |         |         |
3+15       0.1402      0.61  |QV       |         |         |         |
3+20       0.1444      0.62  |QV       |         |         |         |
3+25       0.1487      0.62  |QV       |         |         |         |
3+30       0.1529      0.62  |QV       |         |         |         |
3+35       0.1572      0.62  |QV       |         |         |         |
3+40       0.1615      0.62  |QV       |         |         |         |
3+45       0.1658      0.63  |QV       |         |         |         |
3+50       0.1701      0.63  |QV       |         |         |         |
3+55       0.1745      0.63  |QV       |         |         |         |
4+ 0       0.1788      0.63  |Q V      |         |         |         |
4+ 5       0.1832      0.63  |Q V      |         |         |         |
4+10       0.1876      0.64  |Q V      |         |         |         |
4+15       0.1920      0.64  |Q V      |         |         |         |
4+20       0.1964      0.64  |Q V      |         |         |         |
4+25       0.2008      0.64  |Q V      |         |         |         |
4+30       0.2052      0.64  |Q V      |         |         |         |
4+35       0.2097      0.65  |Q V      |         |         |         |
4+40       0.2142      0.65  |Q V      |         |         |         |
4+45       0.2186      0.65  |Q V      |         |         |         |
4+50       0.2231      0.65  |Q V      |         |         |         |
4+55       0.2277      0.66  |Q V      |         |         |         |
5+ 0       0.2322      0.66  |Q V      |         |         |         |
5+ 5       0.2367      0.66  |Q  V     |         |         |         |
5+10       0.2413      0.66  |Q  V     |         |         |         |
5+15       0.2459      0.67  |Q  V     |         |         |         |
5+20       0.2505      0.67  |Q  V     |         |         |         |
5+25       0.2551      0.67  |Q  V     |         |         |         |
5+30       0.2598      0.67  |Q  V     |         |         |         |
5+35       0.2644      0.68  |Q  V     |         |         |         |
5+40       0.2691      0.68  |Q  V     |         |         |         |
5+45       0.2738      0.68  |Q  V     |         |         |         |
5+50       0.2785      0.68  |Q  V     |         |         |         |
5+55       0.2832      0.69  |Q  V     |         |         |         |
6+ 0       0.2880      0.69  |Q  V     |         |         |         |
6+ 5       0.2927      0.69  |Q  V     |         |         |         |
6+10       0.2975      0.69  |Q   V    |         |         |         |
6+15       0.3023      0.70  |Q   V    |         |         |         |
6+20       0.3071      0.70  |Q   V    |         |         |         |
6+25       0.3120      0.70  |Q   V    |         |         |         |
6+30       0.3168      0.71  |Q   V    |         |         |         |
6+35       0.3217      0.71  |Q   V    |         |         |         |
6+40       0.3266      0.71  |Q   V    |         |         |         |
6+45       0.3315      0.71  |Q   V    |         |         |         |
6+50       0.3365      0.72  |Q   V    |         |         |         |
6+55       0.3414      0.72  |Q   V    |         |         |         |
7+ 0       0.3464      0.72  |Q   V    |         |         |         |
7+ 5       0.3514      0.73  |Q    V   |         |         |         |
7+10       0.3565      0.73  |Q    V   |         |         |         |
7+15       0.3615      0.73  |Q    V   |         |         |         |
7+20       0.3666      0.74  |Q    V   |         |         |         |
7+25       0.3717      0.74  |Q    V   |         |         |         |
7+30       0.3768      0.74  |Q    V   |         |         |         |
7+35       0.3820      0.75  |Q    V   |         |         |         |
7+40       0.3872      0.75  |Q    V   |         |         |         |
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 7+45      0.3923      0.75  |Q    V   |         |         |         |
 7+50      0.3976      0.76  |Q    V   |         |         |         |
 7+55      0.4028      0.76  |Q    V   |         |         |         |
 8+ 0      0.4081      0.77  |Q    V   |         |         |         |
 8+ 5      0.4134      0.77  |Q     V  |         |         |         |
 8+10      0.4187      0.77  |Q     V  |         |         |         |
 8+15      0.4241      0.78  |Q     V  |         |         |         |
 8+20      0.4294      0.78  |Q     V  |         |         |         |
 8+25      0.4348      0.78  |Q     V  |         |         |         |
 8+30      0.4403      0.79  |Q     V  |         |         |         |
 8+35      0.4457      0.79  |Q     V  |         |         |         |
 8+40      0.4512      0.80  |Q     V  |         |         |         |
 8+45      0.4568      0.80  |Q     V  |         |         |         |
 8+50      0.4623      0.81  |Q     V  |         |         |         |
 8+55      0.4679      0.81  |Q     V  |         |         |         |
 9+ 0      0.4735      0.81  |Q      V |         |         |         |
 9+ 5      0.4791      0.82  |Q      V |         |         |         |
 9+10      0.4848      0.82  |Q      V |         |         |         |
 9+15      0.4905      0.83  |Q      V |         |         |         |
 9+20      0.4963      0.83  |Q      V |         |         |         |
 9+25      0.5020      0.84  |Q      V |         |         |         |
 9+30      0.5079      0.84  |Q      V |         |         |         |
 9+35      0.5137      0.85  |Q      V |         |         |         |
 9+40      0.5196      0.85  |Q      V |         |         |         |
 9+45      0.5255      0.86  |Q      V |         |         |         |
 9+50      0.5315      0.86  |Q       V|         |         |         |
 9+55      0.5374      0.87  |Q       V|         |         |         |
10+ 0      0.5435      0.88  |Q       V|         |         |         |
10+ 5      0.5495      0.88  |Q       V|         |         |         |
10+10      0.5556      0.89  |Q       V|         |         |         |
10+15      0.5618      0.89  |Q       V|         |         |         |
10+20      0.5680      0.90  |Q       V|         |         |         |
10+25      0.5742      0.91  |Q       V|         |         |         |
10+30      0.5805      0.91  |Q       V|         |         |         |
10+35      0.5868      0.92  |Q        V         |         |         |
10+40      0.5932      0.92  |Q        V         |         |         |
10+45      0.5996      0.93  |Q        V         |         |         |
10+50      0.6061      0.94  |Q        V         |         |         |
10+55      0.6126      0.94  |Q        V         |         |         |
11+ 0      0.6191      0.95  |Q        V         |         |         |
11+ 5      0.6257      0.96  |Q        V         |         |         |
11+10      0.6324      0.97  |Q        V         |         |         |
11+15      0.6391      0.97  |Q        V         |         |         |
11+20      0.6459      0.98  |Q        |V         |         |         |
11+25      0.6527      0.99  |Q        |V         |         |         |
11+30      0.6596      1.00  |Q        |V         |         |         |
11+35      0.6665      1.01  | Q       |V         |         |         |
11+40      0.6735      1.02  | Q       |V         |         |         |
11+45      0.6806      1.03  | Q       |V         |         |         |
11+50      0.6877      1.03  | Q       |V         |         |         |
11+55      0.6949      1.04  | Q       |V         |         |         |
12+ 0      0.7021      1.05  | Q       |V         |         |         |
12+ 5      0.7095      1.06  | Q       | V        |         |         |
12+10      0.7169      1.07  | Q       | V        |         |         |
12+15      0.7243      1.09  | Q       | V        |         |         |
12+20      0.7319      1.10  | Q       | V        |         |         |
12+25      0.7396      1.11  | Q       | V        |         |         |
12+30      0.7473      1.12  | Q       | V        |         |         |
12+35      0.7551      1.13  | Q       | V        |         |         |
12+40      0.7630      1.15  | Q       |  V       |         |         |
12+45      0.7710      1.16  | Q       |  V       |         |         |
12+50      0.7790      1.17  | Q       |  V       |         |         |
12+55      0.7872      1.19  | Q       |  V       |         |         |
13+ 0      0.7955      1.20  | Q       |  V       |         |         |
13+ 5      0.8039      1.22  | Q       |  V       |         |         |
13+10      0.8123      1.23  | Q       |  V       |         |         |
13+15      0.8209      1.25  | Q       |   V      |         |         |
13+20      0.8296      1.26  | Q       |   V      |         |         |
13+25      0.8384      1.28  | Q       |   V      |         |         |
```

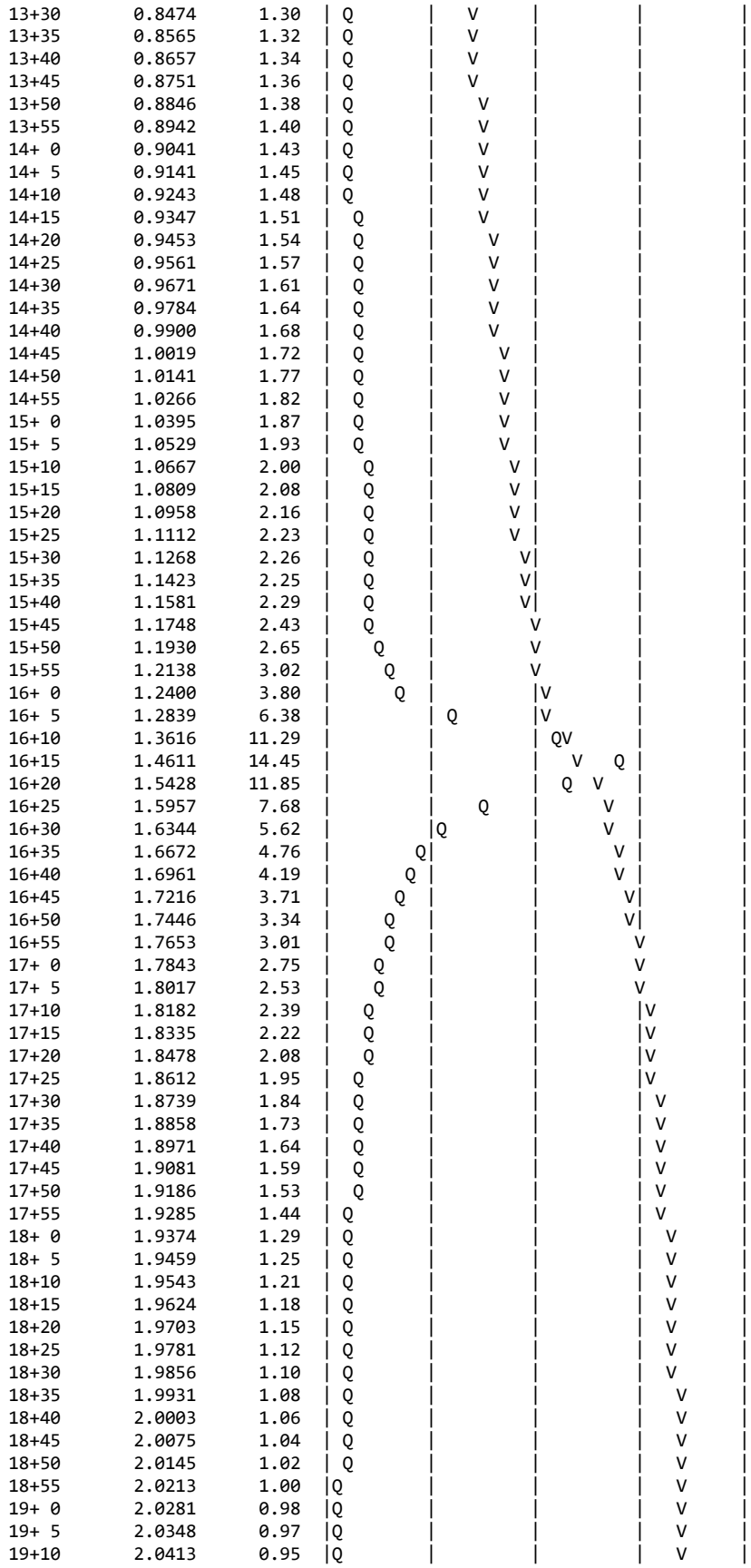
13+30 0.8474 1.30
13+35 0.8565 1.32
13+40 0.8657 1.34
13+45 0.8751 1.36
13+50 0.8846 1.38
13+55 0.8942 1.40
14+ 0 0.9041 1.43
14+ 5 0.9141 1.45
14+10 0.9243 1.48
14+15 0.9347 1.51
14+20 0.9453 1.54
14+25 0.9561 1.57
14+30 0.9671 1.61
14+35 0.9784 1.64
14+40 0.9900 1.68
14+45 1.0019 1.72
14+50 1.0141 1.77
14+55 1.0266 1.82
15+ 0 1.0395 1.87
15+ 5 1.0529 1.93
15+10 1.0667 2.00
15+15 1.0809 2.08
15+20 1.0958 2.16
15+25 1.1112 2.23
15+30 1.1268 2.26
15+35 1.1423 2.25
15+40 1.1581 2.29
15+45 1.1748 2.43
15+50 1.1930 2.65
15+55 1.2138 3.02
16+ 0 1.2400 3.80
16+ 5 1.2839 6.38
16+10 1.3616 11.29
16+15 1.4611 14.45
16+20 1.5428 11.85
16+25 1.5957 7.68
16+30 1.6344 5.62
16+35 1.6672 4.76
16+40 1.6961 4.19
16+45 1.7216 3.71
16+50 1.7446 3.34
16+55 1.7653 3.01
17+ 0 1.7843 2.75
17+ 5 1.8017 2.53
17+10 1.8182 2.39
17+15 1.8335 2.22
17+20 1.8478 2.08
17+25 1.8612 1.95
17+30 1.8739 1.84
17+35 1.8858 1.73
17+40 1.8971 1.64
17+45 1.9081 1.59
17+50 1.9186 1.53
17+55 1.9285 1.44
18+ 0 1.9374 1.29
18+ 5 1.9459 1.25
18+10 1.9543 1.21
18+15 1.9624 1.18
18+20 1.9703 1.15
18+25 1.9781 1.12
18+30 1.9856 1.10
18+35 1.9931 1.08
18+40 2.0003 1.06
18+45 2.0075 1.04
18+50 2.0145 1.02
18+55 2.0213 1.00
19+ 0 2.0281 0.98
19+ 5 2.0348 0.97
19+10 2.0413 0.95

```
19+15       2.0478      0.94  |Q        |         |         |   V     |
19+20       2.0541      0.92  |Q        |         |         |    V    |
19+25       2.0604      0.91  |Q        |         |         |    V    |
19+30       2.0666      0.90  |Q        |         |         |    V    |
19+35       2.0727      0.89  |Q        |         |         |    V    |
19+40       2.0787      0.87  |Q        |         |         |    V    |
19+45       2.0846      0.86  |Q        |         |         |    V    |
19+50       2.0905      0.85  |Q        |         |         |    V    |
19+55       2.0963      0.84  |Q        |         |         |    V    |
20+ 0       2.1020      0.83  |Q        |         |         |    V    |
20+ 5       2.1077      0.82  |Q        |         |         |     V   |
20+10       2.1133      0.81  |Q        |         |         |     V   |
20+15       2.1188      0.80  |Q        |         |         |     V   |
20+20       2.1243      0.80  |Q        |         |         |     V   |
20+25       2.1297      0.79  |Q        |         |         |     V   |
20+30       2.1351      0.78  |Q        |         |         |     V   |
20+35       2.1404      0.77  |Q        |         |         |     V   |
20+40       2.1457      0.76  |Q        |         |         |     V   |
20+45       2.1509      0.76  |Q        |         |         |     V   |
20+50       2.1560      0.75  |Q        |         |         |     V   |
20+55       2.1611      0.74  |Q        |         |         |     V   |
21+ 0       2.1662      0.74  |Q        |         |         |      V  |
21+ 5       2.1712      0.73  |Q        |         |         |      V  |
21+10       2.1762      0.72  |Q        |         |         |      V  |
21+15       2.1811      0.72  |Q        |         |         |      V  |
21+20       2.1860      0.71  |Q        |         |         |      V  |
21+25       2.1909      0.70  |Q        |         |         |      V  |
21+30       2.1957      0.70  |Q        |         |         |      V  |
21+35       2.2005      0.69  |Q        |         |         |      V  |
21+40       2.2052      0.69  |Q        |         |         |      V  |
21+45       2.2099      0.68  |Q        |         |         |      V  |
21+50       2.2145      0.68  |Q        |         |         |      V  |
21+55       2.2192      0.67  |Q        |         |         |      V  |
22+ 0       2.2238      0.67  |Q        |         |         |      V  |
22+ 5       2.2283      0.66  |Q        |         |         |       V |
22+10       2.2328      0.66  |Q        |         |         |       V |
22+15       2.2373      0.65  |Q        |         |         |       V |
22+20       2.2418      0.65  |Q        |         |         |       V |
22+25       2.2462      0.64  |Q        |         |         |       V |
22+30       2.2506      0.64  |Q        |         |         |       V |
22+35       2.2550      0.63  |Q        |         |         |       V |
22+40       2.2593      0.63  |Q        |         |         |       V |
22+45       2.2637      0.63  |Q        |         |         |       V |
22+50       2.2679      0.62  |Q        |         |         |       V |
22+55       2.2722      0.62  |Q        |         |         |       V |
23+ 0       2.2764      0.61  |Q        |         |         |       V |
23+ 5       2.2806      0.61  |Q        |         |         |       V |
23+10       2.2848      0.61  |Q        |         |         |        V|
23+15       2.2890      0.60  |Q        |         |         |        V|
23+20       2.2931      0.60  |Q        |         |         |        V|
23+25       2.2972      0.60  |Q        |         |         |        V|
23+30       2.3013      0.59  |Q        |         |         |        V|
23+35       2.3053      0.59  |Q        |         |         |        V|
23+40       2.3094      0.59  |Q        |         |         |        V|
23+45       2.3134      0.58  |Q        |         |         |        V|
23+50       2.3174      0.58  |Q        |         |         |        V|
23+55       2.3213      0.58  |Q        |         |         |        V|
24+ 0       2.3253      0.57  |Q        |         |         |        V|
24+ 5       2.3291      0.55  |Q        |         |         |        V|
24+10       2.3322      0.46  Q        |         |         |        V|
24+15       2.3345      0.33  Q        |         |         |        V|
24+20       2.3360      0.22  Q        |         |         |        V|
24+25       2.3371      0.16  Q        |         |         |        V|
24+30       2.3380      0.13  Q        |         |         |        V|
24+35       2.3387      0.10  Q        |         |         |        V|
24+40       2.3393      0.08  Q        |         |         |        V|
24+45       2.3398      0.07  Q        |         |         |        V|
24+50       2.3402      0.06  Q        |         |         |        V|
24+55       2.3405      0.05  Q        |         |         |        V|
```

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   25+ 0       2.3408      0.04  Q        |         |         |        V|
   25+ 5       2.3410      0.03  Q        |         |         |        V|
   25+10       2.3412      0.03  Q        |         |         |        V|
   25+15       2.3413      0.02  Q        |         |         |        V|
   25+20       2.3415      0.02  Q        |         |         |        V|
   25+25       2.3415      0.01  Q        |         |         |        V|
   25+30       2.3416      0.01  Q        |         |         |        V|
   25+35       2.3417      0.01  Q        |         |         |        V|
   25+40       2.3417      0.01  Q        |         |         |        V|
   25+45       2.3417      0.00  Q        |         |         |        V|
   25+50       2.3417      0.00  Q        |         |         |         V
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Study date 04/15/24

++

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

Program License Serial Number 6320

204742 ROUTE 66 TRUCK TERMINAL
EXISTING CONDITIONS AREA "A"
100-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-15-24

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 (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
9.90	1	0.91
Rainfall data for year 2		
9.90	6	1.58
Rainfall data for year 2		
9.90	24	2.75
Rainfall data for year 100		
9.90	1	1.31
Rainfall data for year 100		
9.90	6	3.25
Rainfall data for year 100		
9.90	24	6.80

++

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

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
73.0	89.4	9.90	1.000	0.203	0.970	0.197

Area-averaged adjusted loss rate Fm (In/Hr) = 0.197

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

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
9.60	0.970	73.0	89.4	1.19	0.817
0.30	0.030	98.0	98.0	0.20	0.965

Area-averaged catchment yield fraction, Y = 0.822
Area-averaged low loss fraction, Yb = 0.178
User entry of time of concentration = 0.290 (hours)
++
Watershed area = 9.90(Ac.)
Catchment Lag time = 0.232 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.9195
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.197(In/Hr)
Average low loss rate fraction (Yb) = 0.178 (decimal)
VALLEY UNDEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.485(In)
Computed peak 30-minute rainfall = 0.993(In)
Specified peak 1-hour rainfall = 1.310(In)
Computed peak 3-hour rainfall = 2.287(In)
Specified peak 6-hour rainfall = 3.250(In)
Specified peak 24-hour rainfall = 6.800(In)

Rainfall depth area reduction factors:
Using a total area of 9.90(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.485(In)
30-minute factor = 1.000 Adjusted rainfall = 0.992(In)
1-hour factor = 1.000 Adjusted rainfall = 1.309(In)
3-hour factor = 1.000 Adjusted rainfall = 2.287(In)
6-hour factor = 1.000 Adjusted rainfall = 3.250(In)
24-hour factor = 1.000 Adjusted rainfall = 6.800(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 = 119.73 (CFS))	
1	3.719	4.453
2	18.479	17.671
3	42.496	28.755
4	61.763	23.068
5	71.755	11.963
6	77.545	6.932
7	81.822	5.122
8	85.173	4.012
9	87.792	3.136
10	89.955	2.590
11	91.695	2.083
12	93.114	1.700
13	94.260	1.371
14	95.346	1.301
15	96.258	1.092
16	97.015	0.905
17	97.662	0.775
18	98.200	0.645
19	98.644	0.532
20	99.004	0.431
21	99.364	0.430
22	99.723	0.430
23	100.000	0.332

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4846	0.4846
2	0.6395	0.1548
3	0.7520	0.1126
4	0.8438	0.0917
5	0.9225	0.0788
6	0.9923	0.0698
7	1.0554	0.0631
8	1.1134	0.0579
9	1.1671	0.0537
10	1.2173	0.0502
11	1.2646	0.0473
12	1.3094	0.0448
13	1.3637	0.0543
14	1.4159	0.0523
15	1.4664	0.0505
16	1.5152	0.0488
17	1.5626	0.0473
18	1.6085	0.0460
19	1.6533	0.0447
20	1.6969	0.0436
21	1.7394	0.0425
22	1.7810	0.0416
23	1.8216	0.0406
24	1.8614	0.0398
25	1.9004	0.0390
26	1.9386	0.0382
27	1.9760	0.0375
28	2.0129	0.0368
29	2.0490	0.0362
30	2.0846	0.0356
31	2.1196	0.0350
32	2.1540	0.0344
33	2.1879	0.0339
34	2.2213	0.0334
35	2.2542	0.0329
36	2.2867	0.0325
37	2.3187	0.0320
38	2.3502	0.0316
39	2.3814	0.0312
40	2.4122	0.0308
41	2.4426	0.0304
42	2.4726	0.0300
43	2.5023	0.0297
44	2.5316	0.0293
45	2.5606	0.0290
46	2.5893	0.0287
47	2.6177	0.0284
48	2.6458	0.0281
49	2.6737	0.0278
50	2.7012	0.0275
51	2.7285	0.0273
52	2.7555	0.0270
53	2.7822	0.0267
54	2.8087	0.0265
55	2.8350	0.0263
56	2.8610	0.0260
57	2.8868	0.0258
58	2.9124	0.0256
59	2.9377	0.0254
60	2.9629	0.0251
61	2.9878	0.0249
62	3.0126	0.0247
63	3.0371	0.0245
64	3.0615	0.0244
65	3.0856	0.0242
66	3.1096	0.0240
67	3.1334	0.0238

68	3.1570	0.0236
69	3.1805	0.0235
70	3.2038	0.0233
71	3.2269	0.0231
72	3.2499	0.0230
73	3.2739	0.0240
74	3.2977	0.0238
75	3.3213	0.0237
76	3.3448	0.0235
77	3.3682	0.0234
78	3.3914	0.0232
79	3.4145	0.0231
80	3.4375	0.0230
81	3.4603	0.0228
82	3.4830	0.0227
83	3.5055	0.0226
84	3.5280	0.0224
85	3.5503	0.0223
86	3.5724	0.0222
87	3.5945	0.0221
88	3.6165	0.0219
89	3.6383	0.0218
90	3.6600	0.0217
91	3.6816	0.0216
92	3.7031	0.0215
93	3.7245	0.0214
94	3.7457	0.0213
95	3.7669	0.0212
96	3.7880	0.0211
97	3.8089	0.0210
98	3.8298	0.0209
99	3.8506	0.0208
100	3.8712	0.0207
101	3.8918	0.0206
102	3.9123	0.0205
103	3.9327	0.0204
104	3.9529	0.0203
105	3.9731	0.0202
106	3.9932	0.0201
107	4.0133	0.0200
108	4.0332	0.0199
109	4.0530	0.0198
110	4.0728	0.0198
111	4.0925	0.0197
112	4.1121	0.0196
113	4.1316	0.0195
114	4.1510	0.0194
115	4.1704	0.0194
116	4.1896	0.0193
117	4.2088	0.0192
118	4.2280	0.0191
119	4.2470	0.0190
120	4.2660	0.0190
121	4.2849	0.0189
122	4.3037	0.0188
123	4.3224	0.0188
124	4.3411	0.0187
125	4.3597	0.0186
126	4.3783	0.0185
127	4.3967	0.0185
128	4.4151	0.0184
129	4.4335	0.0183
130	4.4518	0.0183
131	4.4700	0.0182
132	4.4881	0.0181
133	4.5062	0.0181
134	4.5242	0.0180
135	4.5421	0.0179
136	4.5600	0.0179

137	4.5778	0.0178
138	4.5956	0.0178
139	4.6133	0.0177
140	4.6310	0.0176
141	4.6485	0.0176
142	4.6661	0.0175
143	4.6835	0.0175
144	4.7010	0.0174
145	4.7183	0.0174
146	4.7356	0.0173
147	4.7529	0.0172
148	4.7701	0.0172
149	4.7872	0.0171
150	4.8043	0.0171
151	4.8213	0.0170
152	4.8383	0.0170
153	4.8552	0.0169
154	4.8721	0.0169
155	4.8889	0.0168
156	4.9057	0.0168
157	4.9224	0.0167
158	4.9391	0.0167
159	4.9557	0.0166
160	4.9723	0.0166
161	4.9888	0.0165
162	5.0053	0.0165
163	5.0217	0.0164
164	5.0381	0.0164
165	5.0544	0.0163
166	5.0707	0.0163
167	5.0870	0.0162
168	5.1032	0.0162
169	5.1193	0.0162
170	5.1354	0.0161
171	5.1515	0.0161
172	5.1675	0.0160
173	5.1835	0.0160
174	5.1994	0.0159
175	5.2153	0.0159
176	5.2312	0.0159
177	5.2470	0.0158
178	5.2628	0.0158
179	5.2785	0.0157
180	5.2942	0.0157
181	5.3098	0.0156
182	5.3254	0.0156
183	5.3410	0.0156
184	5.3565	0.0155
185	5.3720	0.0155
186	5.3874	0.0154
187	5.4028	0.0154
188	5.4182	0.0154
189	5.4335	0.0153
190	5.4488	0.0153
191	5.4641	0.0153
192	5.4793	0.0152
193	5.4945	0.0152
194	5.5096	0.0151
195	5.5247	0.0151
196	5.5398	0.0151
197	5.5548	0.0150
198	5.5698	0.0150
199	5.5848	0.0150
200	5.5997	0.0149
201	5.6146	0.0149
202	5.6295	0.0149
203	5.6443	0.0148
204	5.6591	0.0148
205	5.6738	0.0148

206	5.6886	0.0147
207	5.7033	0.0147
208	5.7179	0.0147
209	5.7325	0.0146
210	5.7471	0.0146
211	5.7617	0.0146
212	5.7762	0.0145
213	5.7907	0.0145
214	5.8052	0.0145
215	5.8196	0.0144
216	5.8340	0.0144
217	5.8484	0.0144
218	5.8627	0.0143
219	5.8770	0.0143
220	5.8913	0.0143
221	5.9055	0.0142
222	5.9197	0.0142
223	5.9339	0.0142
224	5.9481	0.0142
225	5.9622	0.0141
226	5.9763	0.0141
227	5.9904	0.0141
228	6.0044	0.0140
229	6.0184	0.0140
230	6.0324	0.0140
231	6.0464	0.0140
232	6.0603	0.0139
233	6.0742	0.0139
234	6.0881	0.0139
235	6.1019	0.0138
236	6.1157	0.0138
237	6.1295	0.0138
238	6.1433	0.0138
239	6.1570	0.0137
240	6.1707	0.0137
241	6.1844	0.0137
242	6.1980	0.0137
243	6.2117	0.0136
244	6.2253	0.0136
245	6.2388	0.0136
246	6.2524	0.0135
247	6.2659	0.0135
248	6.2794	0.0135
249	6.2929	0.0135
250	6.3063	0.0134
251	6.3197	0.0134
252	6.3331	0.0134
253	6.3465	0.0134
254	6.3599	0.0133
255	6.3732	0.0133
256	6.3865	0.0133
257	6.3998	0.0133
258	6.4130	0.0132
259	6.4262	0.0132
260	6.4394	0.0132
261	6.4526	0.0132
262	6.4658	0.0132
263	6.4789	0.0131
264	6.4920	0.0131
265	6.5051	0.0131
266	6.5182	0.0131
267	6.5312	0.0130
268	6.5442	0.0130
269	6.5572	0.0130
270	6.5702	0.0130
271	6.5831	0.0129
272	6.5960	0.0129
273	6.6089	0.0129
274	6.6218	0.0129

275	6.6347	0.0129
276	6.6475	0.0128
277	6.6603	0.0128
278	6.6731	0.0128
279	6.6859	0.0128
280	6.6987	0.0128
281	6.7114	0.0127
282	6.7241	0.0127
283	6.7368	0.0127
284	6.7495	0.0127
285	6.7621	0.0126
286	6.7747	0.0126
287	6.7873	0.0126
288	6.7999	0.0126

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0126	0.0022	0.0103
2	0.0126	0.0022	0.0104
3	0.0126	0.0023	0.0104
4	0.0127	0.0023	0.0104
5	0.0127	0.0023	0.0104
6	0.0127	0.0023	0.0105
7	0.0128	0.0023	0.0105
8	0.0128	0.0023	0.0105
9	0.0128	0.0023	0.0106
10	0.0129	0.0023	0.0106
11	0.0129	0.0023	0.0106
12	0.0129	0.0023	0.0106
13	0.0130	0.0023	0.0107
14	0.0130	0.0023	0.0107
15	0.0130	0.0023	0.0107
16	0.0131	0.0023	0.0107
17	0.0131	0.0023	0.0108
18	0.0131	0.0023	0.0108
19	0.0132	0.0023	0.0108
20	0.0132	0.0024	0.0109
21	0.0132	0.0024	0.0109
22	0.0133	0.0024	0.0109
23	0.0133	0.0024	0.0109
24	0.0133	0.0024	0.0110
25	0.0134	0.0024	0.0110
26	0.0134	0.0024	0.0110
27	0.0135	0.0024	0.0111
28	0.0135	0.0024	0.0111
29	0.0135	0.0024	0.0111
30	0.0136	0.0024	0.0112
31	0.0136	0.0024	0.0112
32	0.0137	0.0024	0.0112
33	0.0137	0.0024	0.0113
34	0.0137	0.0024	0.0113
35	0.0138	0.0025	0.0113
36	0.0138	0.0025	0.0114
37	0.0139	0.0025	0.0114
38	0.0139	0.0025	0.0114
39	0.0140	0.0025	0.0115
40	0.0140	0.0025	0.0115
41	0.0140	0.0025	0.0115
42	0.0141	0.0025	0.0116
43	0.0141	0.0025	0.0116
44	0.0142	0.0025	0.0116
45	0.0142	0.0025	0.0117
46	0.0142	0.0025	0.0117
47	0.0143	0.0025	0.0118
48	0.0143	0.0026	0.0118
49	0.0144	0.0026	0.0118
50	0.0144	0.0026	0.0119

51	0.0145	0.0026	0.0119
52	0.0145	0.0026	0.0119
53	0.0146	0.0026	0.0120
54	0.0146	0.0026	0.0120
55	0.0147	0.0026	0.0121
56	0.0147	0.0026	0.0121
57	0.0148	0.0026	0.0122
58	0.0148	0.0026	0.0122
59	0.0149	0.0027	0.0122
60	0.0149	0.0027	0.0123
61	0.0150	0.0027	0.0123
62	0.0150	0.0027	0.0124
63	0.0151	0.0027	0.0124
64	0.0151	0.0027	0.0124
65	0.0152	0.0027	0.0125
66	0.0153	0.0027	0.0125
67	0.0153	0.0027	0.0126
68	0.0154	0.0027	0.0126
69	0.0154	0.0028	0.0127
70	0.0155	0.0028	0.0127
71	0.0156	0.0028	0.0128
72	0.0156	0.0028	0.0128
73	0.0157	0.0028	0.0129
74	0.0157	0.0028	0.0129
75	0.0158	0.0028	0.0130
76	0.0159	0.0028	0.0130
77	0.0159	0.0028	0.0131
78	0.0160	0.0028	0.0131
79	0.0161	0.0029	0.0132
80	0.0161	0.0029	0.0132
81	0.0162	0.0029	0.0133
82	0.0162	0.0029	0.0134
83	0.0163	0.0029	0.0134
84	0.0164	0.0029	0.0135
85	0.0165	0.0029	0.0135
86	0.0165	0.0029	0.0136
87	0.0166	0.0030	0.0137
88	0.0167	0.0030	0.0137
89	0.0168	0.0030	0.0138
90	0.0168	0.0030	0.0138
91	0.0169	0.0030	0.0139
92	0.0170	0.0030	0.0140
93	0.0171	0.0030	0.0140
94	0.0171	0.0031	0.0141
95	0.0172	0.0031	0.0142
96	0.0173	0.0031	0.0142
97	0.0174	0.0031	0.0143
98	0.0175	0.0031	0.0144
99	0.0176	0.0031	0.0145
100	0.0176	0.0031	0.0145
101	0.0178	0.0032	0.0146
102	0.0178	0.0032	0.0147
103	0.0179	0.0032	0.0148
104	0.0180	0.0032	0.0148
105	0.0181	0.0032	0.0149
106	0.0182	0.0032	0.0150
107	0.0183	0.0033	0.0151
108	0.0184	0.0033	0.0151
109	0.0185	0.0033	0.0152
110	0.0186	0.0033	0.0153
111	0.0188	0.0033	0.0154
112	0.0188	0.0034	0.0155
113	0.0190	0.0034	0.0156
114	0.0190	0.0034	0.0157
115	0.0192	0.0034	0.0158
116	0.0193	0.0034	0.0158
117	0.0194	0.0035	0.0160
118	0.0195	0.0035	0.0160
119	0.0197	0.0035	0.0162

120	0.0198	0.0035	0.0162
121	0.0199	0.0036	0.0164
122	0.0200	0.0036	0.0165
123	0.0202	0.0036	0.0166
124	0.0203	0.0036	0.0167
125	0.0205	0.0036	0.0168
126	0.0206	0.0037	0.0169
127	0.0208	0.0037	0.0171
128	0.0209	0.0037	0.0171
129	0.0211	0.0038	0.0173
130	0.0212	0.0038	0.0174
131	0.0214	0.0038	0.0176
132	0.0215	0.0038	0.0177
133	0.0217	0.0039	0.0178
134	0.0218	0.0039	0.0179
135	0.0221	0.0039	0.0181
136	0.0222	0.0040	0.0182
137	0.0224	0.0040	0.0184
138	0.0226	0.0040	0.0185
139	0.0228	0.0041	0.0188
140	0.0230	0.0041	0.0189
141	0.0232	0.0041	0.0191
142	0.0234	0.0042	0.0192
143	0.0237	0.0042	0.0194
144	0.0238	0.0042	0.0196
145	0.0230	0.0041	0.0189
146	0.0231	0.0041	0.0190
147	0.0235	0.0042	0.0193
148	0.0236	0.0042	0.0194
149	0.0240	0.0043	0.0197
150	0.0242	0.0043	0.0199
151	0.0245	0.0044	0.0202
152	0.0247	0.0044	0.0203
153	0.0251	0.0045	0.0207
154	0.0254	0.0045	0.0208
155	0.0258	0.0046	0.0212
156	0.0260	0.0046	0.0214
157	0.0265	0.0047	0.0218
158	0.0267	0.0048	0.0220
159	0.0273	0.0049	0.0224
160	0.0275	0.0049	0.0226
161	0.0281	0.0050	0.0231
162	0.0284	0.0051	0.0233
163	0.0290	0.0052	0.0238
164	0.0293	0.0052	0.0241
165	0.0300	0.0054	0.0247
166	0.0304	0.0054	0.0250
167	0.0312	0.0056	0.0256
168	0.0316	0.0056	0.0259
169	0.0325	0.0058	0.0267
170	0.0329	0.0059	0.0271
171	0.0339	0.0060	0.0279
172	0.0344	0.0061	0.0283
173	0.0356	0.0063	0.0292
174	0.0362	0.0064	0.0297
175	0.0375	0.0067	0.0308
176	0.0382	0.0068	0.0314
177	0.0398	0.0071	0.0327
178	0.0406	0.0072	0.0334
179	0.0425	0.0076	0.0350
180	0.0436	0.0078	0.0358
181	0.0460	0.0082	0.0378
182	0.0473	0.0084	0.0389
183	0.0505	0.0090	0.0415
184	0.0523	0.0093	0.0430
185	0.0448	0.0080	0.0368
186	0.0473	0.0084	0.0389
187	0.0537	0.0096	0.0441
188	0.0579	0.0103	0.0476

189	0.0698	0.0124	0.0574
190	0.0788	0.0140	0.0647
191	0.1126	0.0164	0.0962
192	0.1548	0.0164	0.1384
193	0.4846	0.0164	0.4682
194	0.0917	0.0163	0.0754
195	0.0631	0.0112	0.0519
196	0.0502	0.0089	0.0413
197	0.0543	0.0097	0.0446
198	0.0488	0.0087	0.0401
199	0.0447	0.0080	0.0368
200	0.0416	0.0074	0.0342
201	0.0390	0.0069	0.0320
202	0.0368	0.0066	0.0303
203	0.0350	0.0062	0.0287
204	0.0334	0.0059	0.0274
205	0.0320	0.0057	0.0263
206	0.0308	0.0055	0.0253
207	0.0297	0.0053	0.0244
208	0.0287	0.0051	0.0236
209	0.0278	0.0050	0.0229
210	0.0270	0.0048	0.0222
211	0.0263	0.0047	0.0216
212	0.0256	0.0046	0.0210
213	0.0249	0.0044	0.0205
214	0.0244	0.0043	0.0200
215	0.0238	0.0042	0.0196
216	0.0233	0.0041	0.0191
217	0.0240	0.0043	0.0197
218	0.0235	0.0042	0.0193
219	0.0231	0.0041	0.0190
220	0.0227	0.0040	0.0186
221	0.0223	0.0040	0.0183
222	0.0219	0.0039	0.0180
223	0.0216	0.0038	0.0178
224	0.0213	0.0038	0.0175
225	0.0210	0.0037	0.0172
226	0.0207	0.0037	0.0170
227	0.0204	0.0036	0.0167
228	0.0201	0.0036	0.0165
229	0.0198	0.0035	0.0163
230	0.0196	0.0035	0.0161
231	0.0194	0.0034	0.0159
232	0.0191	0.0034	0.0157
233	0.0189	0.0034	0.0155
234	0.0187	0.0033	0.0154
235	0.0185	0.0033	0.0152
236	0.0183	0.0033	0.0150
237	0.0181	0.0032	0.0149
238	0.0179	0.0032	0.0147
239	0.0177	0.0032	0.0146
240	0.0175	0.0031	0.0144
241	0.0174	0.0031	0.0143
242	0.0172	0.0031	0.0141
243	0.0170	0.0030	0.0140
244	0.0169	0.0030	0.0139
245	0.0167	0.0030	0.0137
246	0.0166	0.0030	0.0136
247	0.0164	0.0029	0.0135
248	0.0163	0.0029	0.0134
249	0.0162	0.0029	0.0133
250	0.0160	0.0029	0.0132
251	0.0159	0.0028	0.0131
252	0.0158	0.0028	0.0130
253	0.0156	0.0028	0.0129
254	0.0155	0.0028	0.0128
255	0.0154	0.0027	0.0127
256	0.0153	0.0027	0.0126
257	0.0152	0.0027	0.0125

258	0.0151	0.0027	0.0124
259	0.0150	0.0027	0.0123
260	0.0149	0.0026	0.0122
261	0.0148	0.0026	0.0121
262	0.0147	0.0026	0.0120
263	0.0146	0.0026	0.0120
264	0.0145	0.0026	0.0119
265	0.0144	0.0026	0.0118
266	0.0143	0.0025	0.0117
267	0.0142	0.0025	0.0117
268	0.0141	0.0025	0.0116
269	0.0140	0.0025	0.0115
270	0.0139	0.0025	0.0114
271	0.0138	0.0025	0.0114
272	0.0138	0.0025	0.0113
273	0.0137	0.0024	0.0112
274	0.0136	0.0024	0.0112
275	0.0135	0.0024	0.0111
276	0.0134	0.0024	0.0111
277	0.0134	0.0024	0.0110
278	0.0133	0.0024	0.0109
279	0.0132	0.0024	0.0109
280	0.0132	0.0023	0.0108
281	0.0131	0.0023	0.0108
282	0.0130	0.0023	0.0107
283	0.0129	0.0023	0.0106
284	0.0129	0.0023	0.0106
285	0.0128	0.0023	0.0105
286	0.0128	0.0023	0.0105
287	0.0127	0.0023	0.0104
288	0.0126	0.0022	0.0104

Total soil rain loss = 1.13(In)
Total effective rainfall = 5.67(In)
Peak flow rate in flood hydrograph = 20.99(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0
0+ 5	0.0003	0.05	Q				
0+10	0.0019	0.23	Q				
0+15	0.0055	0.53	Q				
0+20	0.0108	0.77	VQ				
0+25	0.0169	0.89	VQ				
0+30	0.0236	0.97	VQ				
0+35	0.0306	1.02	VQ				
0+40	0.0380	1.07	VQ				
0+45	0.0455	1.10	VQ				
0+50	0.0533	1.13	VQ				
0+55	0.0613	1.15	VQ				
1+ 0	0.0694	1.17	VQ				
1+ 5	0.0776	1.19	VQ				
1+10	0.0859	1.21	VQ				
1+15	0.0943	1.22	VQ				
1+20	0.1028	1.24	VQ				
1+25	0.1114	1.25	VQ				
1+30	0.1201	1.26	|Q				
1+35	0.1288	1.27	|Q				
1+40	0.1376	1.27	|Q				
1+45	0.1464	1.28	|Q				
1+50	0.1552	1.29	|Q				
1+55	0.1642	1.30	|Q				

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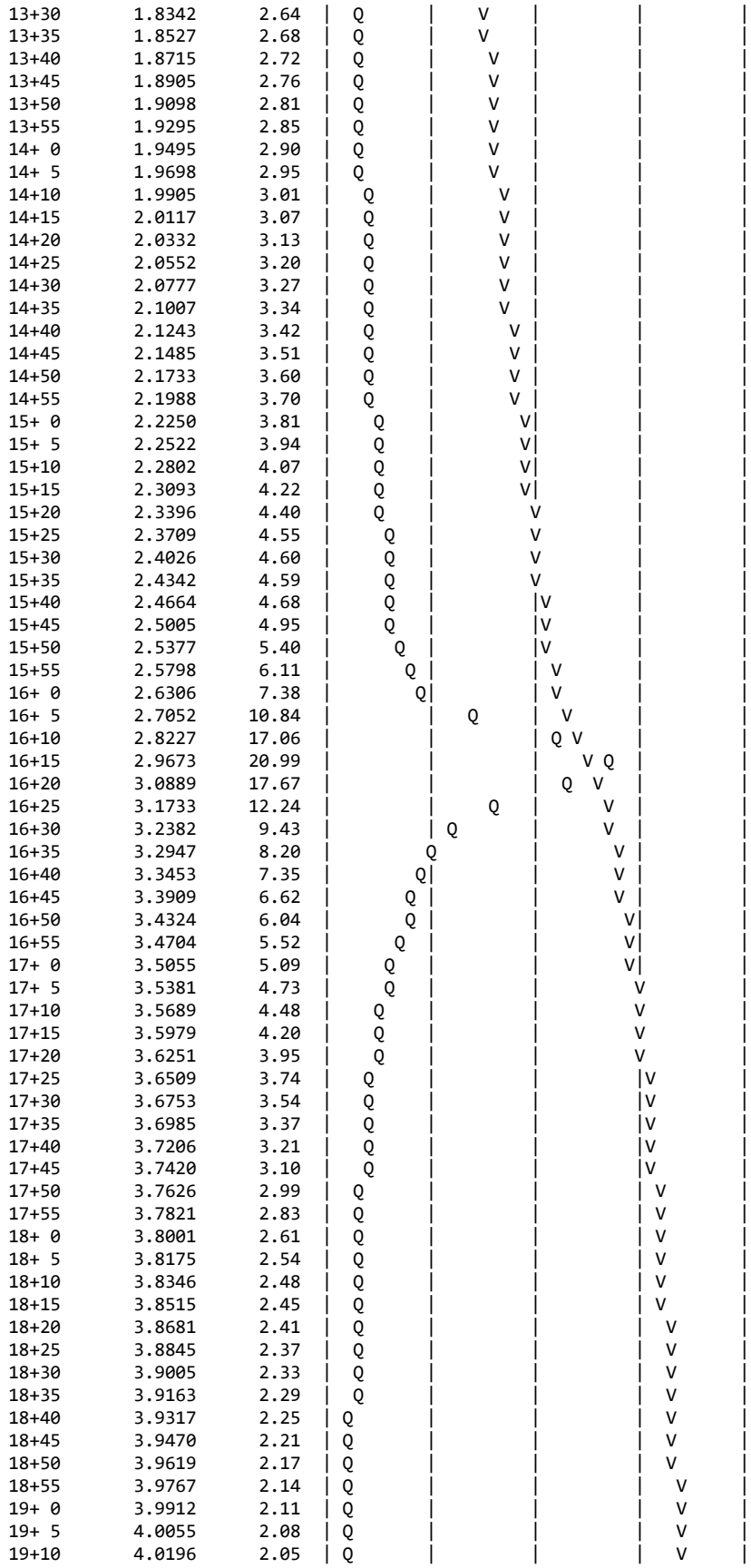
2+ 0       0.1731      1.30  |Q        |         |         |         |
2+ 5       0.1821      1.30  |Q        |         |         |         |
2+10       0.1911      1.31  |Q        |         |         |         |
2+15       0.2001      1.31  |Q        |         |         |         |
2+20       0.2092      1.31  |Q        |         |         |         |
2+25       0.2182      1.32  |Q        |         |         |         |
2+30       0.2273      1.32  |Q        |         |         |         |
2+35       0.2364      1.32  |QV       |         |         |         |
2+40       0.2456      1.33  |QV       |         |         |         |
2+45       0.2548      1.33  |QV       |         |         |         |
2+50       0.2640      1.34  |QV       |         |         |         |
2+55       0.2732      1.34  |QV       |         |         |         |
3+ 0       0.2824      1.34  |QV       |         |         |         |
3+ 5       0.2917      1.35  |QV       |         |         |         |
3+10       0.3010      1.35  |QV       |         |         |         |
3+15       0.3104      1.36  |QV       |         |         |         |
3+20       0.3197      1.36  |QV       |         |         |         |
3+25       0.3291      1.36  |QV       |         |         |         |
3+30       0.3385      1.37  |QV       |         |         |         |
3+35       0.3480      1.37  |QV       |         |         |         |
3+40       0.3575      1.38  |Q V      |         |         |         |
3+45       0.3670      1.38  |Q V      |         |         |         |
3+50       0.3765      1.38  |Q V      |         |         |         |
3+55       0.3861      1.39  |Q V      |         |         |         |
4+ 0       0.3957      1.39  |Q V      |         |         |         |
4+ 5       0.4053      1.40  |Q V      |         |         |         |
4+10       0.4150      1.40  |Q V      |         |         |         |
4+15       0.4246      1.41  |Q V      |         |         |         |
4+20       0.4344      1.41  |Q V      |         |         |         |
4+25       0.4441      1.42  |Q V      |         |         |         |
4+30       0.4539      1.42  |Q V      |         |         |         |
4+35       0.4637      1.42  |Q V      |         |         |         |
4+40       0.4735      1.43  |Q  V     |         |         |         |
4+45       0.4834      1.43  |Q  V     |         |         |         |
4+50       0.4933      1.44  |Q  V     |         |         |         |
4+55       0.5033      1.44  |Q  V     |         |         |         |
5+ 0       0.5133      1.45  |Q  V     |         |         |         |
5+ 5       0.5233      1.45  |Q  V     |         |         |         |
5+10       0.5333      1.46  |Q  V     |         |         |         |
5+15       0.5434      1.46  |Q  V     |         |         |         |
5+20       0.5535      1.47  |Q  V     |         |         |         |
5+25       0.5637      1.47  |Q  V     |         |         |         |
5+30       0.5739      1.48  |Q  V     |         |         |         |
5+35       0.5841      1.49  |Q  V     |         |         |         |
5+40       0.5944      1.49  |Q   V    |         |         |         |
5+45       0.6047      1.50  |Q   V    |         |         |         |
5+50       0.6150      1.50  | Q  V    |         |         |         |
5+55       0.6254      1.51  | Q  V    |         |         |         |
6+ 0       0.6358      1.51  | Q  V    |         |         |         |
6+ 5       0.6463      1.52  | Q  V    |         |         |         |
6+10       0.6568      1.52  | Q  V    |         |         |         |
6+15       0.6673      1.53  | Q  V    |         |         |         |
6+20       0.6779      1.54  | Q  V    |         |         |         |
6+25       0.6885      1.54  | Q  V    |         |         |         |
6+30       0.6991      1.55  | Q  V    |         |         |         |
6+35       0.7098      1.55  | Q   V   |         |         |         |
6+40       0.7206      1.56  | Q   V   |         |         |         |
6+45       0.7314      1.57  | Q   V   |         |         |         |
6+50       0.7422      1.57  | Q   V   |         |         |         |
6+55       0.7531      1.58  | Q   V   |         |         |         |
7+ 0       0.7640      1.59  | Q   V   |         |         |         |
7+ 5       0.7750      1.59  | Q   V   |         |         |         |
7+10       0.7860      1.60  | Q   V   |         |         |         |
7+15       0.7970      1.61  | Q   V   |         |         |         |
7+20       0.8082      1.61  | Q   V   |         |         |         |
7+25       0.8193      1.62  | Q    V  |         |         |         |
7+30       0.8305      1.63  | Q    V  |         |         |         |
7+35       0.8418      1.63  | Q    V  |         |         |         |
7+40       0.8531      1.64  | Q    V  |         |         |         |
```

7+45	0.8644	1.65	Q V			
7+50	0.8758	1.66	Q V			
7+55	0.8873	1.66	Q V			
8+ 0	0.8988	1.67	Q V			
8+ 5	0.9104	1.68	Q V			
8+10	0.9220	1.69	Q V			
8+15	0.9336	1.70	Q V			
8+20	0.9454	1.70	Q V			
8+25	0.9572	1.71	Q V			
8+30	0.9690	1.72	Q V			
8+35	0.9809	1.73	Q V			
8+40	0.9929	1.74	Q V			
8+45	1.0049	1.75	Q V			
8+50	1.0170	1.75	Q V			
8+55	1.0291	1.76	Q V			
9+ 0	1.0414	1.77	Q V			
9+ 5	1.0536	1.78	Q V			
9+10	1.0660	1.79	Q V			
9+15	1.0784	1.80	Q V			
9+20	1.0909	1.81	Q V			
9+25	1.1034	1.82	Q V			
9+30	1.1160	1.83	Q V			
9+35	1.1287	1.84	Q V			
9+40	1.1415	1.85	Q V			
9+45	1.1543	1.86	Q V			
9+50	1.1672	1.88	Q V			
9+55	1.1802	1.89	Q V			
10+ 0	1.1933	1.90	Q V			
10+ 5	1.2064	1.91	Q V			
10+10	1.2197	1.92	Q V			
10+15	1.2330	1.93	Q V			
10+20	1.2464	1.95	Q V			
10+25	1.2599	1.96	Q V			
10+30	1.2735	1.97	Q V			
10+35	1.2871	1.98	Q V			
10+40	1.3009	2.00	Q V			
10+45	1.3148	2.01	Q V			
10+50	1.3287	2.03	Q V			
10+55	1.3428	2.04	Q V			
11+ 0	1.3569	2.05	Q V			
11+ 5	1.3712	2.07	Q V			
11+10	1.3855	2.09	Q V			
11+15	1.4000	2.10	Q V			
11+20	1.4146	2.12	Q V			
11+25	1.4293	2.13	Q V			
11+30	1.4441	2.15	Q V			
11+35	1.4590	2.17	Q V			
11+40	1.4741	2.19	Q V			
11+45	1.4892	2.20	Q V			
11+50	1.5045	2.22	Q V			
11+55	1.5200	2.24	Q V			
12+ 0	1.5356	2.26	Q V			
12+ 5	1.5512	2.28	Q V			
12+10	1.5670	2.28	Q V			
12+15	1.5826	2.28	Q V			
12+20	1.5983	2.28	Q V			
12+25	1.6141	2.29	Q V			
12+30	1.6300	2.31	Q V			
12+35	1.6460	2.33	Q V			
12+40	1.6622	2.35	Q V			
12+45	1.6785	2.37	Q V			
12+50	1.6950	2.40	Q V			
12+55	1.7117	2.42	Q V			
13+ 0	1.7285	2.45	Q V			
13+ 5	1.7456	2.48	Q V			
13+10	1.7629	2.51	Q V			
13+15	1.7804	2.54	Q V			
13+20	1.7981	2.57	Q V			
13+25	1.8160	2.61	Q V			



19+15	4.0335	2.02	Q				V
19+20	4.0472	1.99	Q				V
19+25	4.0608	1.97	Q				V
19+30	4.0741	1.94	Q				V
19+35	4.0873	1.92	Q				V
19+40	4.1003	1.89	Q				V
19+45	4.1132	1.87	Q				V
19+50	4.1260	1.85	Q				V
19+55	4.1386	1.83	Q				V
20+ 0	4.1510	1.81	Q				V
20+ 5	4.1633	1.79	Q				V
20+10	4.1755	1.77	Q				V
20+15	4.1876	1.75	Q				V
20+20	4.1995	1.73	Q				V
20+25	4.2113	1.72	Q				V
20+30	4.2230	1.70	Q				V
20+35	4.2346	1.68	Q				V
20+40	4.2461	1.67	Q				V
20+45	4.2575	1.65	Q				V
20+50	4.2688	1.64	Q				V
20+55	4.2799	1.62	Q				V
21+ 0	4.2910	1.61	Q				V
21+ 5	4.3020	1.60	Q				V
21+10	4.3129	1.58	Q				V
21+15	4.3237	1.57	Q				V
21+20	4.3344	1.56	Q				V
21+25	4.3451	1.54	Q				V
21+30	4.3556	1.53	Q				V
21+35	4.3661	1.52	Q				V
21+40	4.3765	1.51	Q				V
21+45	4.3868	1.50	Q				V
21+50	4.3970	1.49	Q				V
21+55	4.4072	1.48	Q				V
22+ 0	4.4173	1.47	Q				V
22+ 5	4.4273	1.46	Q				V
22+10	4.4373	1.45	Q				V
22+15	4.4472	1.44	Q				V
22+20	4.4570	1.43	Q				V
22+25	4.4668	1.42	Q				V
22+30	4.4765	1.41	Q				V
22+35	4.4861	1.40	Q				V
22+40	4.4957	1.39	Q				V
22+45	4.5052	1.38	Q				V
22+50	4.5146	1.37	Q				V
22+55	4.5240	1.36	Q				V
23+ 0	4.5334	1.36	Q				V
23+ 5	4.5427	1.35	Q				V
23+10	4.5519	1.34	Q				V
23+15	4.5611	1.33	Q				V
23+20	4.5702	1.33	Q				V
23+25	4.5793	1.32	Q				V
23+30	4.5883	1.31	Q				V
23+35	4.5973	1.30	Q				V
23+40	4.6062	1.30	Q				V
23+45	4.6151	1.29	Q				V
23+50	4.6240	1.28	Q				V
23+55	4.6328	1.28	Q				V
24+ 0	4.6415	1.27	Q				V
24+ 5	4.6499	1.22	Q				V
24+10	4.6570	1.03	Q				V
24+15	4.6620	0.73	Q				V
24+20	4.6653	0.48	Q				V
24+25	4.6678	0.36	Q				V
24+30	4.6697	0.29	Q				V
24+35	4.6713	0.23	Q				V
24+40	4.6726	0.19	Q				V
24+45	4.6737	0.15	Q				V
24+50	4.6746	0.13	Q				V
24+55	4.6753	0.11	Q				V

```
   25+ 0       4.6759      0.09  Q        |         |         |        V|
   25+ 5       4.6764      0.07  Q        |         |         |        V|
   25+10       4.6768      0.06  Q        |         |         |        V|
   25+15       4.6771      0.05  Q        |         |         |        V|
   25+20       4.6774      0.04  Q        |         |         |        V|
   25+25       4.6776      0.03  Q        |         |         |        V|
   25+30       4.6777      0.02  Q        |         |         |        V|
   25+35       4.6779      0.02  Q        |         |         |        V|
   25+40       4.6779      0.01  Q        |         |         |        V|
   25+45       4.6780      0.01  Q        |         |         |        V|
   25+50       4.6780      0.00  Q        |         |         |        V|
-------------------------------------------------------------------------
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ATTACHMENT 3

Developed Conditions
Rational Method Calculations

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 04/16/24

204742 ROUTE 66 TRUCK TERMINAL
DEVELOPED CONDITIONS - AREA "A" & "B"
10-YEAR, 1-HOUR STORM
BY: JTS DATE: 04-16-24

Program License Serial Number 6320

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

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.910 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 2

++
Process from Point/Station 0.000 to Point/Station 1.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 44.00
Pervious ratio(Ap) = 0.4200 Max loss rate(Fm)= 0.368(In/Hr)
Initial subarea data:
Initial area flow distance = 762.830(Ft.)
Top (of initial area) elevation = 1209.100(Ft.)
Bottom (of initial area) elevation = 1197.630(Ft.)
Difference in elevation = 11.470(Ft.)
Slope = 0.01504 s(%)= 1.50
TC = k(0.378)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.449 min.
Rainfall intensity = 2.338(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.758
Subarea runoff = 8.527(CFS)
Total initial stream area = 4.810(Ac.)
Pervious area fraction = 0.420
Initial area Fm value = 0.368(In/Hr)

++
Process from Point/Station 1.000 to Point/Station 2.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 1193.630(Ft.)
Downstream point/station elevation = 1192.330(Ft.)
Pipe length = 267.83(Ft.) Manning's N = 0.012
No. of pipes = 1 Required pipe flow = 8.527(CFS)
Given pipe size = 24.00(In.)
Calculated individual pipe flow = 8.527(CFS)
Normal flow depth in pipe = 11.99(In.)
Flow top width inside pipe = 24.00(In.)
Critical Depth = 12.49(In.)
Pipe flow velocity = 5.43(Ft/s)
Travel time through pipe = 0.82 min.
Time of concentration (TC) = 13.27 min.

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      4.810(Ac.)
Runoff from this stream =      8.527(CFS)
Time of concentration =   13.27 min.
Rainfall intensity =     2.250(In/Hr)
Area averaged loss rate (Fm) =    0.3684(In/Hr)
Area averaged Pervious ratio (Ap) = 0.4200


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station        4.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 44.00
Pervious ratio(Ap) = 0.3800     Max loss rate(Fm)=     0.333(In/Hr)
Initial subarea data:
Initial area flow distance =   721.840(Ft.)
Top (of initial area) elevation =  1208.200(Ft.)
Bottom (of initial area) elevation =  1197.710(Ft.)
Difference in elevation =    10.490(Ft.)
Slope =    0.01453  s(%)=       1.45
TC = k(0.368)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.940 min.
Rainfall intensity =      2.397(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.775
Subarea runoff =     10.477(CFS)
Total initial stream area =        5.640(Ac.)
Pervious area fraction = 0.380
Initial area Fm value =    0.333(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station        4.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      5.640(Ac.)
Runoff from this stream =     10.477(CFS)
Time of concentration =   11.94 min.
Rainfall intensity =     2.397(In/Hr)
Area averaged loss rate (Fm) =    0.3333(In/Hr)
Area averaged Pervious ratio (Ap) = 0.3800
Summary of stream data:

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


1      8.53     4.810     13.27    0.368      2.250
2     10.48     5.640     11.94    0.333      2.397
Qmax(1) =
           1.000 *    1.000 *     8.527) +
           0.929 *    1.000 *    10.477) + =      18.257
Qmax(2) =
           1.078 *    0.900 *     8.527) +
           1.000 *    1.000 *    10.477) + =      18.750

Total of 2 streams to confluence:
Flow rates before confluence point:
       8.527      10.477
Maximum flow rates at confluence using above data:
       18.257       18.750
```

```
Area of streams before confluence:
        4.810        5.640
Effective area values after confluence:
       10.450        9.968
Results of confluence:
Total flow rate =     18.750(CFS)
Time of concentration =    11.940 min.
Effective stream area after confluence =      9.968(Ac.)
Study area average Pervious fraction(Ap) =  0.398
Study area average soil loss rate(Fm) =    0.349(In/Hr)
Study area total (this main stream) =      10.45(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        0.000 to Point/Station        1.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 44.00
Pervious ratio(Ap) = 0.3700     Max loss rate(Fm)=     0.325(In/Hr)
Initial subarea data:
Initial area flow distance =   760.720(Ft.)
Top (of initial area) elevation =  1208.800(Ft.)
Bottom (of initial area) elevation =  1200.380(Ft.)
Difference in elevation =     8.420(Ft.)
Slope =    0.01107  s(%)=       1.11
TC = k(0.366)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.789 min.
Rainfall intensity =      2.301(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.773
Subarea runoff =      9.354(CFS)
Total initial stream area =        5.260(Ac.)
Pervious area fraction = 0.370
Initial area Fm value =    0.325(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1198.780(Ft.)
Downstream point/station elevation =  1198.610(Ft.)
Pipe length  =    34.87(Ft.)   Manning's N = 0.012
No. of pipes = 1  Required pipe flow  =     9.354(CFS)
Given pipe size =     24.00(In.)
Calculated individual pipe flow  =     9.354(CFS)
Normal flow depth in pipe =   12.66(In.)
Flow top width inside pipe =   23.96(In.)
Critical Depth =   13.11(In.)
Pipe flow velocity =      5.57(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =    12.89 min.
End of computations, Total Study Area =           15.71 (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) = 0.389
Area averaged SCS curve number =  44.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 04/16/24

204742 ROUTE 66 TRUCK TERMINAL
DEVELOPED CONDITIONS - AREA "A" & "B"
100-YEAR, 1-HOUR STORM
BY: JTS DATE: 04-16-24

Program License Serial Number 6320

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

Rational hydrology study storm event year is 100.0
10 Year storm 1 hour rainfall = 0.910(In.)
100 Year storm 1 hour rainfall = 1.310(In.)
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.310 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 0.000 to Point/Station 1.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 44.00
Adjusted SCS curve number for AMC 3 = 64.00
Pervious ratio(Ap) = 0.4200 Max loss rate(Fm)= 0.262(In/Hr)
Initial subarea data:
Initial area flow distance = 762.830(Ft.)
Top (of initial area) elevation = 1209.100(Ft.)
Bottom (of initial area) elevation = 1197.630(Ft.)
Difference in elevation = 11.470(Ft.)
Slope = 0.01504 s(%)= 1.50
TC = k(0.378)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.449 min.
Rainfall intensity = 3.366(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.830
Subarea runoff = 13.438(CFS)
Total initial stream area = 4.810(Ac.)
Pervious area fraction = 0.420
Initial area Fm value = 0.262(In/Hr)

++
Process from Point/Station 1.000 to Point/Station 2.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 1193.630(Ft.)
Downstream point/station elevation = 1192.330(Ft.)
Pipe length = 267.83(Ft.) Manning's N = 0.012
No. of pipes = 1 Required pipe flow = 13.438(CFS)
Given pipe size = 24.00(In.)
Calculated individual pipe flow = 13.438(CFS)
Normal flow depth in pipe = 16.05(In.)
Flow top width inside pipe = 22.59(In.)
Critical Depth = 15.84(In.)
Pipe flow velocity = 6.02(Ft/s)

```
Travel time through pipe =    0.74 min.
Time of concentration (TC) =    13.19 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      4.810(Ac.)
Runoff from this stream =     13.438(CFS)
Time of concentration =   13.19 min.
Rainfall intensity =     3.251(In/Hr)
Area averaged loss rate (Fm) =    0.2616(In/Hr)
Area averaged Pervious ratio (Ap) = 0.4200


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station        4.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 44.00
Adjusted SCS curve number for AMC 3 = 64.00
Pervious ratio(Ap) = 0.3800     Max loss rate(Fm)=     0.237(In/Hr)
Initial subarea data:
Initial area flow distance =   721.840(Ft.)
Top (of initial area) elevation =  1208.200(Ft.)
Bottom (of initial area) elevation =  1197.710(Ft.)
Difference in elevation =    10.490(Ft.)
Slope =    0.01453  s(%)=       1.45
TC = k(0.368)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.940 min.
Rainfall intensity =      3.451(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.838
Subarea runoff =     16.317(CFS)
Total initial stream area =        5.640(Ac.)
Pervious area fraction = 0.380
Initial area Fm value =    0.237(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station        4.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      5.640(Ac.)
Runoff from this stream =     16.317(CFS)
Time of concentration =   11.94 min.
Rainfall intensity =     3.451(In/Hr)
Area averaged loss rate (Fm) =    0.2367(In/Hr)
Area averaged Pervious ratio (Ap) = 0.3800
Summary of stream data:

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


1     13.44     4.810     13.19    0.262      3.251
2     16.32     5.640     11.94    0.237      3.451
Qmax(1) =
           1.000 *    1.000 *    13.438) +
           0.938 *    1.000 *    16.317) + =      28.739
Qmax(2) =
           1.067 *    0.905 *    13.438) +
           1.000 *    1.000 *    16.317) + =      29.296

Total of 2 streams to confluence:
```

```
Flow rates before confluence point:
      13.438      16.317
Maximum flow rates at confluence using above data:
       28.739       29.296
Area of streams before confluence:
        4.810        5.640
Effective area values after confluence:
       10.450        9.994
Results of confluence:
Total flow rate =     29.296(CFS)
Time of concentration =    11.940 min.
Effective stream area after confluence =      9.994(Ac.)
Study area average Pervious fraction(Ap) =  0.398
Study area average soil loss rate(Fm) =    0.248(In/Hr)
Study area total (this main stream) =      10.45(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        0.000 to Point/Station        1.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 44.00
Adjusted SCS curve number for AMC 3 = 64.00
Pervious ratio(Ap) = 0.3700     Max loss rate(Fm)=     0.230(In/Hr)
Initial subarea data:
Initial area flow distance =   760.720(Ft.)
Top (of initial area) elevation =  1208.800(Ft.)
Bottom (of initial area) elevation =  1200.380(Ft.)
Difference in elevation =     8.420(Ft.)
Slope =    0.01107  s(%)=       1.11
TC = k(0.366)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.789 min.
Rainfall intensity =      3.312(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.837
Subarea runoff =     14.587(CFS)
Total initial stream area =        5.260(Ac.)
Pervious area fraction = 0.370
Initial area Fm value =    0.230(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1198.780(Ft.)
Downstream point/station elevation =  1198.610(Ft.)
Pipe length  =    34.87(Ft.)   Manning's N = 0.012
No. of pipes = 1  Required pipe flow  =    14.587(CFS)
Given pipe size =     24.00(In.)
Calculated individual pipe flow  =    14.587(CFS)
Normal flow depth in pipe =   17.04(In.)
Flow top width inside pipe =   21.78(In.)
Critical Depth =   16.52(In.)
Pipe flow velocity =      6.12(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =    12.88 min.
End of computations, Total Study Area =           15.71 (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) = 0.389
Area averaged SCS curve number =  44.0
```

ATTACHMENT 4

Developed Conditions
Hydrograph Calculations

Area A

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018
Study date: 04/17/24

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
2-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-17-24

Program License Serial Number 6320

******************** HYDROGRAPH INFORMATION **********************

From study/file name: DEVHYDA2.rte
**************************HYDROGRAPH DATA**************************
Number of intervals = 294
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12.304 (CFS)
Total volume = 1.378 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++
Process from Point/Station 0.000 to Point/Station 0.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****
All flow in excess of 0.74(CFS) is diverted
into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1) is 0.45(Ac.Ft)
++
P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

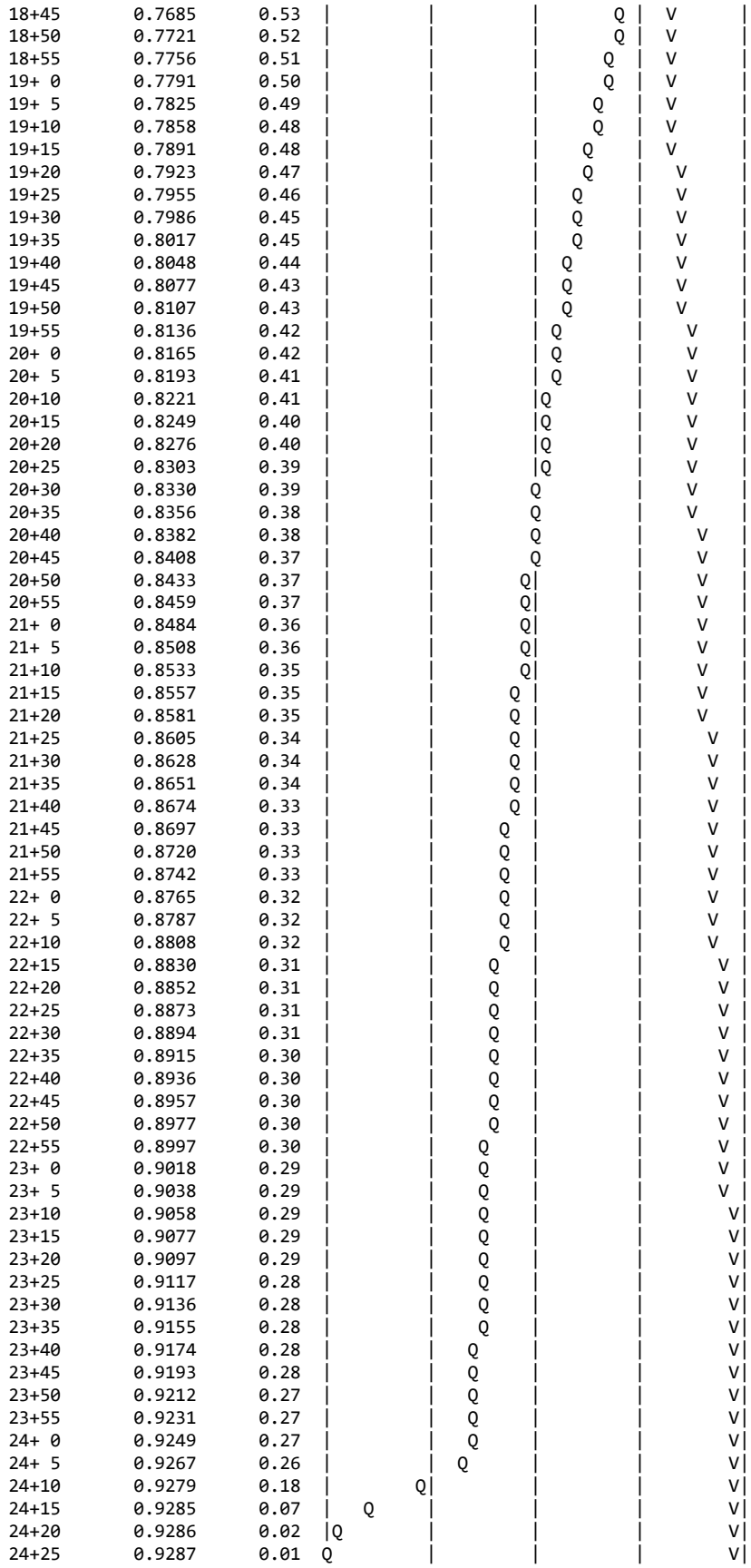
Hydrograph in 5 Minute intervals (CFS)

Time(h+m)	Volume(Ac.Ft)	Q(CFS)	0	0.2	0.4	0.6	0.7
0+ 5	0.0001	0.01	Q				
0+10	0.0007	0.09	V Q				
0+15	0.0020	0.19	V	Q			
0+20	0.0037	0.24	V	Q			
0+25	0.0055	0.26	V	Q			
0+30	0.0073	0.27	V	Q			
0+35	0.0091	0.27	V	Q			
0+40	0.0110	0.27	V	Q			
0+45	0.0129	0.27	V	Q			
0+50	0.0147	0.27	V	Q			
0+55	0.0166	0.27	V	Q			
1+ 0	0.0185	0.27	V	Q			
1+ 5	0.0204	0.27	V	Q			
1+10	0.0223	0.27	V	Q			
1+15	0.0242	0.28	V	Q			
1+20	0.0261	0.28	V	Q			
1+25	0.0280	0.28	V	Q			

```
1+30       0.0299      0.28  |V        |    Q    |         |         |
1+35       0.0318      0.28  |V        |    Q    |         |         |
1+40       0.0338      0.28  |V        |    Q    |         |         |
1+45       0.0357      0.28  |V        |    Q    |         |         |
1+50       0.0376      0.28  |V        |    Q    |         |         |
1+55       0.0396      0.28  |V        |    Q    |         |         |
2+ 0       0.0416      0.28  |V        |    Q    |         |         |
2+ 5       0.0435      0.29  |V        |    Q    |         |         |
2+10       0.0455      0.29  |V        |    Q    |         |         |
2+15       0.0475      0.29  | V       |    Q    |         |         |
2+20       0.0495      0.29  | V       |    Q    |         |         |
2+25       0.0515      0.29  | V       |    Q    |         |         |
2+30       0.0535      0.29  | V       |    Q    |         |         |
2+35       0.0555      0.29  | V       |    Q    |         |         |
2+40       0.0575      0.29  | V       |    Q    |         |         |
2+45       0.0595      0.29  | V       |    Q    |         |         |
2+50       0.0615      0.29  | V       |    Q    |         |         |
2+55       0.0636      0.30  | V       |    Q    |         |         |
3+ 0       0.0656      0.30  | V       |     Q   |         |         |
3+ 5       0.0677      0.30  | V       |     Q   |         |         |
3+10       0.0697      0.30  |  V      |     Q   |         |         |
3+15       0.0718      0.30  |  V      |     Q   |         |         |
3+20       0.0739      0.30  |  V      |     Q   |         |         |
3+25       0.0760      0.30  |  V      |     Q   |         |         |
3+30       0.0781      0.30  |  V      |     Q   |         |         |
3+35       0.0802      0.31  |  V      |     Q   |         |         |
3+40       0.0823      0.31  |  V      |     Q   |         |         |
3+45       0.0844      0.31  |  V      |     Q   |         |         |
3+50       0.0865      0.31  |  V      |     Q   |         |         |
3+55       0.0887      0.31  |  V      |     Q   |         |         |
4+ 0       0.0908      0.31  |  V      |     Q   |         |         |
4+ 5       0.0930      0.31  |   V     |     Q   |         |         |
4+10       0.0951      0.31  |   V     |     Q   |         |         |
4+15       0.0973      0.32  |   V     |      Q  |         |         |
4+20       0.0995      0.32  |   V     |      Q  |         |         |
4+25       0.1017      0.32  |   V     |      Q  |         |         |
4+30       0.1039      0.32  |   V     |      Q  |         |         |
4+35       0.1061      0.32  |   V     |      Q  |         |         |
4+40       0.1083      0.32  |   V     |      Q  |         |         |
4+45       0.1105      0.32  |   V     |      Q  |         |         |
4+50       0.1128      0.32  |   V     |      Q  |         |         |
4+55       0.1150      0.33  |   V     |      Q  |         |         |
5+ 0       0.1173      0.33  |    V    |      Q  |         |         |
5+ 5       0.1195      0.33  |    V    |      Q  |         |         |
5+10       0.1218      0.33  |    V    |      Q  |         |         |
5+15       0.1241      0.33  |    V    |      Q  |         |         |
5+20       0.1264      0.33  |    V    |      Q  |         |         |
5+25       0.1287      0.34  |    V    |       Q |         |         |
5+30       0.1310      0.34  |    V    |       Q |         |         |
5+35       0.1334      0.34  |    V    |       Q |         |         |
5+40       0.1357      0.34  |    V    |       Q |         |         |
5+45       0.1381      0.34  |    V    |       Q |         |         |
5+50       0.1404      0.34  |     V   |       Q |         |         |
5+55       0.1428      0.35  |     V   |       Q |         |         |
6+ 0       0.1452      0.35  |     V   |       Q |         |         |
6+ 5       0.1476      0.35  |     V   |       Q |         |         |
6+10       0.1500      0.35  |     V   |       Q |         |         |
6+15       0.1524      0.35  |     V   |       Q |         |         |
6+20       0.1548      0.35  |     V   |        Q|         |         |
6+25       0.1573      0.36  |     V   |        Q|         |         |
6+30       0.1598      0.36  |     V   |        Q|         |         |
6+35       0.1622      0.36  |     V   |        Q|         |         |
6+40       0.1647      0.36  |      V  |        Q|         |         |
6+45       0.1672      0.36  |      V  |        Q|         |         |
6+50       0.1697      0.36  |      V  |        Q|         |         |
6+55       0.1723      0.37  |      V  |        Q|         |         |
7+ 0       0.1748      0.37  |      V  |        Q|         |         |
7+ 5       0.1773      0.37  |      V  |        Q|         |         |
7+10       0.1799      0.37  |      V  |         Q         |         |
```

```
 7+15       0.1825      0.37  |      V  |         Q         |         |
 7+20       0.1851      0.38  |      V  |         Q         |         |
 7+25       0.1877      0.38  |       V |         Q         |         |
 7+30       0.1903      0.38  |       V |         Q         |         |
 7+35       0.1930      0.38  |       V |         Q         |         |
 7+40       0.1956      0.39  |       V |         Q         |         |
 7+45       0.1983      0.39  |       V |         Q         |         |
 7+50       0.2010      0.39  |       V |        |Q         |         |
 7+55       0.2037      0.39  |       V |        |Q         |         |
 8+ 0       0.2064      0.39  |       V |        |Q         |         |
 8+ 5       0.2091      0.40  |        V|        |Q         |         |
 8+10       0.2119      0.40  |        V|        |Q         |         |
 8+15       0.2147      0.40  |        V|        |Q         |         |
 8+20       0.2175      0.40  |        V|        |Q         |         |
 8+25       0.2203      0.41  |        V|        |Q         |         |
 8+30       0.2231      0.41  |        V|        | Q        |         |
 8+35       0.2259      0.41  |        V|        | Q        |         |
 8+40       0.2288      0.42  |        V|        | Q        |         |
 8+45       0.2317      0.42  |        V|        | Q        |         |
 8+50       0.2346      0.42  |         V        | Q        |         |
 8+55       0.2375      0.42  |         V        | Q        |         |
 9+ 0       0.2404      0.43  |         V        |  Q       |         |
 9+ 5       0.2434      0.43  |         V        |  Q       |         |
 9+10       0.2464      0.43  |         V        |  Q       |         |
 9+15       0.2494      0.44  |         V        |  Q       |         |
 9+20       0.2524      0.44  |         V        |  Q       |         |
 9+25       0.2555      0.44  |          V       |  Q       |         |
 9+30       0.2585      0.45  |         |V       |   Q      |         |
 9+35       0.2616      0.45  |         |V       |   Q      |         |
 9+40       0.2647      0.45  |         |V       |   Q      |         |
 9+45       0.2679      0.46  |         |V       |   Q      |         |
 9+50       0.2710      0.46  |         |V       |   Q      |         |
 9+55       0.2742      0.46  |         |V       |   Q      |         |
10+ 0       0.2774      0.47  |         |V       |    Q     |         |
10+ 5       0.2807      0.47  |         | V      |    Q     |         |
10+10       0.2839      0.47  |         | V      |    Q     |         |
10+15       0.2872      0.48  |         | V      |    Q     |         |
10+20       0.2906      0.48  |         | V      |     Q    |         |
10+25       0.2939      0.49  |         | V      |     Q    |         |
10+30       0.2973      0.49  |         | V      |     Q    |         |
10+35       0.3007      0.50  |         | V      |     Q    |         |
10+40       0.3041      0.50  |         |  V     |     Q    |         |
10+45       0.3076      0.50  |         |  V     |      Q   |         |
10+50       0.3111      0.51  |         |  V     |      Q   |         |
10+55       0.3147      0.51  |         |  V     |      Q   |         |
11+ 0       0.3182      0.52  |         |  V     |      Q   |         |
11+ 5       0.3218      0.52  |         |  V     |       Q  |         |
11+10       0.3255      0.53  |         |   V    |       Q  |         |
11+15       0.3291      0.53  |         |   V    |       Q  |         |
11+20       0.3329      0.54  |         |   V    |        Q|         |
11+25       0.3366      0.54  |         |   V    |        Q|         |
11+30       0.3404      0.55  |         |   V    |        Q|         |
11+35       0.3442      0.56  |         |   V    |         Q         |
11+40       0.3481      0.56  |         |   V    |         Q         |
11+45       0.3520      0.57  |         |    V   |         Q         |
11+50       0.3560      0.58  |         |    V   |         |Q        |
11+55       0.3600      0.58  |         |    V   |         |Q        |
12+ 0       0.3641      0.59  |         |    V   |         |Q        |
12+ 5       0.3682      0.60  |         |    V   |         | Q       |
12+10       0.3728      0.66  |         |     V  |         |    Q    |
12+15       0.3778      0.73  |         |     V  |         |       Q|
12+20       0.3829      0.74  |         |     V  |         |        Q
12+25       0.3880      0.74  |         |     V  |         |        Q
12+30       0.3931      0.74  |         |     V  |         |        Q
12+35       0.3983      0.74  |         |      V |         |        Q
12+40       0.4034      0.74  |         |      V |         |        Q
12+45       0.4085      0.74  |         |      V |         |        Q
12+50       0.4136      0.74  |         |      V |         |        Q
12+55       0.4187      0.74  |         |       V|         |        Q
```

```
13+ 0       0.4238      0.74  |         |       V |         |         Q
13+ 5       0.4289      0.74  |         |       V |         |         Q
13+10       0.4340      0.74  |         |       V |         |         Q
13+15       0.4391      0.74  |         |       V |         |         Q
13+20       0.4442      0.74  |         |        V|         |         Q
13+25       0.4494      0.74  |         |        V|         |         Q
13+30       0.4545      0.74  |         |        V|         |         Q
13+35       0.4596      0.74  |         |        V|         |         Q
13+40       0.4647      0.74  |         |         V         |         Q
13+45       0.4698      0.74  |         |         V         |         Q
13+50       0.4749      0.74  |         |         V         |         Q
13+55       0.4800      0.74  |         |         V         |         Q
14+ 0       0.4851      0.74  |         |         V         |         Q
14+ 5       0.4902      0.74  |         |          V        |         Q
14+10       0.4953      0.74  |         |         |V        |         Q
14+15       0.5005      0.74  |         |         |V        |         Q
14+20       0.5056      0.74  |         |         |V        |         Q
14+25       0.5107      0.74  |         |         |V        |         Q
14+30       0.5158      0.74  |         |         | V       |         Q
14+35       0.5209      0.74  |         |         | V       |         Q
14+40       0.5260      0.74  |         |         | V       |         Q
14+45       0.5311      0.74  |         |         | V       |         Q
14+50       0.5362      0.74  |         |         |  V      |         Q
14+55       0.5413      0.74  |         |         |  V      |         Q
15+ 0       0.5464      0.74  |         |         |  V      |         Q
15+ 5       0.5516      0.74  |         |         |  V      |         Q
15+10       0.5567      0.74  |         |         |  V      |         Q
15+15       0.5618      0.74  |         |         |   V     |         Q
15+20       0.5669      0.74  |         |         |   V     |         Q
15+25       0.5720      0.74  |         |         |   V     |         Q
15+30       0.5771      0.74  |         |         |   V     |         Q
15+35       0.5822      0.74  |         |         |    V    |         Q
15+40       0.5873      0.74  |         |         |    V    |         Q
15+45       0.5924      0.74  |         |         |    V    |         Q
15+50       0.5976      0.74  |         |         |    V    |         Q
15+55       0.6027      0.74  |         |         |    V    |         Q
16+ 0       0.6078      0.74  |         |         |     V   |         Q
16+ 5       0.6129      0.74  |         |         |     V   |         Q
16+10       0.6180      0.74  |         |         |     V   |         Q
16+15       0.6231      0.74  |         |         |     V   |         Q
16+20       0.6282      0.74  |         |         |      V  |         Q
16+25       0.6333      0.74  |         |         |      V  |         Q
16+30       0.6384      0.74  |         |         |      V  |         Q
16+35       0.6435      0.74  |         |         |      V  |         Q
16+40       0.6487      0.74  |         |         |      V  |         Q
16+45       0.6538      0.74  |         |         |       V |         Q
16+50       0.6589      0.74  |         |         |       V |         Q
16+55       0.6640      0.74  |         |         |       V |         Q
17+ 0       0.6691      0.74  |         |         |       V |         Q
17+ 5       0.6742      0.74  |         |         |        V|         Q
17+10       0.6793      0.74  |         |         |        V|         Q
17+15       0.6844      0.74  |         |         |        V|         Q
17+20       0.6895      0.74  |         |         |        V|         Q
17+25       0.6946      0.74  |         |         |        V|         Q
17+30       0.6998      0.74  |         |         |         V         Q
17+35       0.7049      0.74  |         |         |         V         Q
17+40       0.7100      0.74  |         |         |         V         Q
17+45       0.7151      0.74  |         |         |         V         Q
17+50       0.7202      0.74  |         |         |          V        Q
17+55       0.7253      0.74  |         |         |         |V        Q
18+ 0       0.7304      0.74  |         |         |         |V        Q
18+ 5       0.7355      0.74  |         |         |         |V        Q
18+10       0.7406      0.74  |         |         |         |V       Q|
18+15       0.7452      0.66  |         |         |         | V  Q    |
18+20       0.7493      0.61  |         |         |         | Q       |
18+25       0.7534      0.58  |         |         |         |QV       |
18+30       0.7573      0.57  |         |         |         Q V       |
18+35       0.7611      0.55  |         |         |        Q| V       |
18+40       0.7648      0.54  |         |         |        Q| V       |
```



```
  24+30       0.9287      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
       ***************************HYDROGRAPH DATA**************************
                    Number of intervals =   294
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        0.742 (CFS)
                    Total volume =       0.929 (Ac.Ft)
            Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
            Peak (CFS)     11.562     0.000     0.000     0.000     0.000
            Vol (Ac.Ft)      0.450     0.000     0.000     0.000     0.000
       *************************************************************************

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


       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        0.000 to Point/Station        0.000
       **** STORE OR DELETE CURRENT HYDROGRAPH ****
       _________________________________________________________________________
       Current stream hydrograph of   5.0 minute
       intervals has been stored as stream number 2 with
       a starting time of   0.00 hours and ending time of 333.33 hours
       With a total volume of       0.93(Ac.Ft)
       ***************************HYDROGRAPH DATA**************************
                    Number of intervals =     0
                    Time interval =    0.0 (Min.)
                    Maximum/Peak flow rate =        0.000 (CFS)
                    Total volume =       0.000 (Ac.Ft)
            Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
            Peak (CFS)     11.562     0.742     0.000     0.000     0.000
            Vol (Ac.Ft)      0.450     0.929     0.000     0.000     0.000
       *************************************************************************

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


       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        1.000 to Point/Station        1.000
       **** ADD/COMBINE/RECOVER HYDROGRAPHS ****
       _________________________________________________________________________
       From stored stream number 1 the total
       volume of       0.45 (Ac.Ft) is being added to the
       current hydrograph at its original rate from user
       with a delay time to start of addition of    0.00 hours.
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                       P R I N T  O F  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) Add q(CFS)  Tot. Q   0        2.9       5.8       8.7      11.6
  ------------------------------------------------------------------------
    0+ 5       0.0000      0.00  Q         |         |         |         |
    0+10       0.0000      0.00  Q         |         |         |         |
    0+15       0.0000      0.00  Q         |         |         |         |
    0+20       0.0000      0.00  Q         |         |         |         |
    0+25       0.0000      0.00  Q         |         |         |         |
    0+30       0.0000      0.00  Q         |         |         |         |
    0+35       0.0000      0.00  Q         |         |         |         |
    0+40       0.0000      0.00  Q         |         |         |         |
    0+45       0.0000      0.00  Q         |         |         |         |
    0+50       0.0000      0.00  Q         |         |         |         |
    0+55       0.0000      0.00  Q         |         |         |         |
    1+ 0       0.0000      0.00  Q         |         |         |         |
    1+ 5       0.0000      0.00  Q         |         |         |         |
    1+10       0.0000      0.00  Q         |         |         |         |
```

1+15	0.0000	0.00	Q				
1+20	0.0000	0.00	Q				
1+25	0.0000	0.00	Q				
1+30	0.0000	0.00	Q				
1+35	0.0000	0.00	Q				
1+40	0.0000	0.00	Q				
1+45	0.0000	0.00	Q				
1+50	0.0000	0.00	Q				
1+55	0.0000	0.00	Q				
2+ 0	0.0000	0.00	Q				
2+ 5	0.0000	0.00	Q				
2+10	0.0000	0.00	Q				
2+15	0.0000	0.00	Q				
2+20	0.0000	0.00	Q				
2+25	0.0000	0.00	Q				
2+30	0.0000	0.00	Q				
2+35	0.0000	0.00	Q				
2+40	0.0000	0.00	Q				
2+45	0.0000	0.00	Q				
2+50	0.0000	0.00	Q				
2+55	0.0000	0.00	Q				
3+ 0	0.0000	0.00	Q				
3+ 5	0.0000	0.00	Q				
3+10	0.0000	0.00	Q				
3+15	0.0000	0.00	Q				
3+20	0.0000	0.00	Q				
3+25	0.0000	0.00	Q				
3+30	0.0000	0.00	Q				
3+35	0.0000	0.00	Q				
3+40	0.0000	0.00	Q				
3+45	0.0000	0.00	Q				
3+50	0.0000	0.00	Q				
3+55	0.0000	0.00	Q				
4+ 0	0.0000	0.00	Q				
4+ 5	0.0000	0.00	Q				
4+10	0.0000	0.00	Q				
4+15	0.0000	0.00	Q				
4+20	0.0000	0.00	Q				
4+25	0.0000	0.00	Q				
4+30	0.0000	0.00	Q				
4+35	0.0000	0.00	Q				
4+40	0.0000	0.00	Q				
4+45	0.0000	0.00	Q				
4+50	0.0000	0.00	Q				
4+55	0.0000	0.00	Q				
5+ 0	0.0000	0.00	Q				
5+ 5	0.0000	0.00	Q				
5+10	0.0000	0.00	Q				
5+15	0.0000	0.00	Q				
5+20	0.0000	0.00	Q				
5+25	0.0000	0.00	Q				
5+30	0.0000	0.00	Q				
5+35	0.0000	0.00	Q				
5+40	0.0000	0.00	Q				
5+45	0.0000	0.00	Q				
5+50	0.0000	0.00	Q				
5+55	0.0000	0.00	Q				
6+ 0	0.0000	0.00	Q				
6+ 5	0.0000	0.00	Q				
6+10	0.0000	0.00	Q				
6+15	0.0000	0.00	Q				
6+20	0.0000	0.00	Q				
6+25	0.0000	0.00	Q				
6+30	0.0000	0.00	Q				
6+35	0.0000	0.00	Q				
6+40	0.0000	0.00	Q				
6+45	0.0000	0.00	Q				
6+50	0.0000	0.00	Q				
6+55	0.0000	0.00	Q				

7+ 0	0.0000	0.00	Q				
7+ 5	0.0000	0.00	Q				
7+10	0.0000	0.00	Q				
7+15	0.0000	0.00	Q				
7+20	0.0000	0.00	Q				
7+25	0.0000	0.00	Q				
7+30	0.0000	0.00	Q				
7+35	0.0000	0.00	Q				
7+40	0.0000	0.00	Q				
7+45	0.0000	0.00	Q				
7+50	0.0000	0.00	Q				
7+55	0.0000	0.00	Q				
8+ 0	0.0000	0.00	Q				
8+ 5	0.0000	0.00	Q				
8+10	0.0000	0.00	Q				
8+15	0.0000	0.00	Q				
8+20	0.0000	0.00	Q				
8+25	0.0000	0.00	Q				
8+30	0.0000	0.00	Q				
8+35	0.0000	0.00	Q				
8+40	0.0000	0.00	Q				
8+45	0.0000	0.00	Q				
8+50	0.0000	0.00	Q				
8+55	0.0000	0.00	Q				
9+ 0	0.0000	0.00	Q				
9+ 5	0.0000	0.00	Q				
9+10	0.0000	0.00	Q				
9+15	0.0000	0.00	Q				
9+20	0.0000	0.00	Q				
9+25	0.0000	0.00	Q				
9+30	0.0000	0.00	Q				
9+35	0.0000	0.00	Q				
9+40	0.0000	0.00	Q				
9+45	0.0000	0.00	Q				
9+50	0.0000	0.00	Q				
9+55	0.0000	0.00	Q				
10+ 0	0.0000	0.00	Q				
10+ 5	0.0000	0.00	Q				
10+10	0.0000	0.00	Q				
10+15	0.0000	0.00	Q				
10+20	0.0000	0.00	Q				
10+25	0.0000	0.00	Q				
10+30	0.0000	0.00	Q				
10+35	0.0000	0.00	Q				
10+40	0.0000	0.00	Q				
10+45	0.0000	0.00	Q				
10+50	0.0000	0.00	Q				
10+55	0.0000	0.00	Q				
11+ 0	0.0000	0.00	Q				
11+ 5	0.0000	0.00	Q				
11+10	0.0000	0.00	Q				
11+15	0.0000	0.00	Q				
11+20	0.0000	0.00	Q				
11+25	0.0000	0.00	Q				
11+30	0.0000	0.00	Q				
11+35	0.0000	0.00	Q				
11+40	0.0000	0.00	Q				
11+45	0.0000	0.00	Q				
11+50	0.0000	0.00	Q				
11+55	0.0000	0.00	Q				
12+ 0	0.0000	0.00	Q				
12+ 5	0.0000	0.00	Q				
12+10	0.0000	0.00	Q				
12+15	0.0000	0.00	Q				
12+20	0.0345	0.03	Q				
12+25	0.0534	0.05	Q				
12+30	0.0643	0.06	Q				
12+35	0.0751	0.08	Q				
12+40	0.0843	0.08	Q				

```
12+45       0.0939      0.09  Q         |         |         |         |
12+50       0.1037      0.10  Q         |         |         |         |
12+55       0.1141      0.11  Q         |         |         |         |
13+ 0       0.1247      0.12  Q         |         |         |         |
13+ 5       0.1359      0.14  Q         |         |         |         |
13+10       0.1473      0.15  Q         |         |         |         |
13+15       0.1595      0.16  Q         |         |         |         |
13+20       0.1718      0.17  Q         |         |         |         |
13+25       0.1851      0.19  Q         |         |         |         |
13+30       0.1986      0.20  Q         |         |         |         |
13+35       0.2130      0.21  Q         |         |         |         |
13+40       0.2278      0.23  Q         |         |         |         |
13+45       0.2437      0.24  Q         |         |         |         |
13+50       0.2601      0.26  Q         |         |         |         |
13+55       0.2777      0.28  Q         |         |         |         |
14+ 0       0.2958      0.30  |Q        |         |         |         |
14+ 5       0.3155      0.32  |Q        |         |         |         |
14+10       0.3360      0.34  |Q        |         |         |         |
14+15       0.3584      0.36  |Q        |         |         |         |
14+20       0.3816      0.38  |Q        |         |         |         |
14+25       0.4067      0.41  |Q        |         |         |         |
14+30       0.4330      0.43  |Q        |         |         |         |
14+35       0.4619      0.46  |Q        |         |         |         |
14+40       0.4924      0.49  |Q        |         |         |         |
14+45       0.5261      0.53  |Q        |         |         |         |
14+50       0.5620      0.56  |Q        |         |         |         |
14+55       0.6021      0.60  | Q       |         |         |         |
15+ 0       0.6453      0.65  | Q       |         |         |         |
15+ 5       0.6940      0.69  | Q       |         |         |         |
15+10       0.7474      0.75  | Q       |         |         |         |
15+15       0.8085      0.81  | Q       |         |         |         |
15+20       0.8768      0.88  |  Q      |         |         |         |
15+25       0.9362      0.94  |  Q      |         |         |         |
15+30       0.9153      0.92  |  Q      |         |         |         |
15+35       0.8606      0.86  | Q       |         |         |         |
15+40       0.9121      0.91  |  Q      |         |         |         |
15+45       1.0572      1.06  |  Q      |         |         |         |
15+50       1.2798      1.28  |   Q     |         |         |         |
15+55       1.6145      1.61  |    Q    |         |         |         |
16+ 0       2.2032      2.20  |      Q  |         |         |         |
16+ 5       4.1260      4.13  |         |   Q     |         |         |
16+10       9.3074      9.31  |         |         |         | Q       |
16+15      11.5622     11.56  |         |         |         |        Q
16+20       6.4629      6.46  |         |         | Q       |         |
16+25       2.8850      2.89  |        Q|         |         |         |
16+30       1.5115      1.51  |    Q    |         |         |         |
16+35       1.2758      1.28  |   Q     |         |         |         |
16+40       0.9200      0.92  |  Q      |         |         |         |
16+45       0.7901      0.79  | Q       |         |         |         |
16+50       0.6803      0.68  | Q       |         |         |         |
16+55       0.5929      0.59  | Q       |         |         |         |
17+ 0       0.5175      0.52  |Q        |         |         |         |
17+ 5       0.4539      0.45  |Q        |         |         |         |
17+10       0.3992      0.40  |Q        |         |         |         |
17+15       0.3514      0.35  |Q        |         |         |         |
17+20       0.3094      0.31  |Q        |         |         |         |
17+25       0.2721      0.27  Q         |         |         |         |
17+30       0.2385      0.24  Q         |         |         |         |
17+35       0.2082      0.21  Q         |         |         |         |
17+40       0.1806      0.18  Q         |         |         |         |
17+45       0.1553      0.16  Q         |         |         |         |
17+50       0.1320      0.13  Q         |         |         |         |
17+55       0.1105      0.11  Q         |         |         |         |
18+ 0       0.0905      0.09  Q         |         |         |         |
18+ 5       0.0634      0.06  Q         |         |         |         |
18+10       0.0000      0.00  Q         |         |         |         |
18+15       0.0000      0.00  Q         |         |         |         |
18+20       0.0000      0.00  Q         |         |         |         |
18+25       0.0000      0.00  Q         |         |         |         |
```

18+30	0.0000	0.00	Q				
18+35	0.0000	0.00	Q				
18+40	0.0000	0.00	Q				
18+45	0.0000	0.00	Q				
18+50	0.0000	0.00	Q				
18+55	0.0000	0.00	Q				
19+ 0	0.0000	0.00	Q				
19+ 5	0.0000	0.00	Q				
19+10	0.0000	0.00	Q				
19+15	0.0000	0.00	Q				
19+20	0.0000	0.00	Q				
19+25	0.0000	0.00	Q				
19+30	0.0000	0.00	Q				
19+35	0.0000	0.00	Q				
19+40	0.0000	0.00	Q				
19+45	0.0000	0.00	Q				
19+50	0.0000	0.00	Q				
19+55	0.0000	0.00	Q				
20+ 0	0.0000	0.00	Q				
20+ 5	0.0000	0.00	Q				
20+10	0.0000	0.00	Q				
20+15	0.0000	0.00	Q				
20+20	0.0000	0.00	Q				
20+25	0.0000	0.00	Q				
20+30	0.0000	0.00	Q				
20+35	0.0000	0.00	Q				
20+40	0.0000	0.00	Q				
20+45	0.0000	0.00	Q				
20+50	0.0000	0.00	Q				
20+55	0.0000	0.00	Q				
21+ 0	0.0000	0.00	Q				
21+ 5	0.0000	0.00	Q				
21+10	0.0000	0.00	Q				
21+15	0.0000	0.00	Q				
21+20	0.0000	0.00	Q				
21+25	0.0000	0.00	Q				
21+30	0.0000	0.00	Q				
21+35	0.0000	0.00	Q				
21+40	0.0000	0.00	Q				
21+45	0.0000	0.00	Q				
21+50	0.0000	0.00	Q				
21+55	0.0000	0.00	Q				
22+ 0	0.0000	0.00	Q				
22+ 5	0.0000	0.00	Q				
22+10	0.0000	0.00	Q				
22+15	0.0000	0.00	Q				
22+20	0.0000	0.00	Q				
22+25	0.0000	0.00	Q				
22+30	0.0000	0.00	Q				
22+35	0.0000	0.00	Q				
22+40	0.0000	0.00	Q				
22+45	0.0000	0.00	Q				
22+50	0.0000	0.00	Q				
22+55	0.0000	0.00	Q				
23+ 0	0.0000	0.00	Q				
23+ 5	0.0000	0.00	Q				
23+10	0.0000	0.00	Q				
23+15	0.0000	0.00	Q				
23+20	0.0000	0.00	Q				
23+25	0.0000	0.00	Q				
23+30	0.0000	0.00	Q				
23+35	0.0000	0.00	Q				
23+40	0.0000	0.00	Q				
23+45	0.0000	0.00	Q				
23+50	0.0000	0.00	Q				
23+55	0.0000	0.00	Q				
24+ 0	0.0000	0.00	Q				
24+ 5	0.0000	0.00	Q				
24+10	0.0000	0.00	Q				

```
   24+15       0.0000      0.00  Q         |         |         |         |
   24+20       0.0000      0.00  Q         |         |         |         |
   24+25       0.0000      0.00  Q         |         |         |         |
   24+30       0.0000      0.00  Q         |         |         |         |
   24+35       0.0000      0.00  Q         |         |         |         |
-------------------------------------------------------------------------
        ****************************HYDROGRAPH DATA****************************
                      Number of intervals =   295
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =       11.562 (CFS)
                      Total volume =       0.450 (Ac.Ft)
               Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
               Peak (CFS)      0.000     0.742     0.000     0.000     0.000
               Vol (Ac.Ft)      0.000     0.929     0.000     0.000     0.000
        *************************************************************************

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


        +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
        Process from Point/Station        0.000 to Point/Station        1.000
        **** RETARDING BASIN ROUTING ****
        _____________________________________________________________________

        Program computation of outflow v. depth




        CALCULATED OUTFLOW DATA AT DEPTH =    0.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.23(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
        Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
        Manning's N = 0.013   No. of pipes = 1
        Given pipe size =     15.00(In.)
        Calculated individual pipe flow  =     0.482(CFS)
        Normal flow depth in pipe =    3.29(In.)
        Flow top width inside pipe =   12.42(In.)
        Critical Depth =    0.27(Ft.)
        Calculated flow rate through pipe(s) =      0.482(CFS)

        Total outflow at this depth =      0.48(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
```

```
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.770(Ft.)
Pipe friction loss =      1.075(Ft.)
Minor friction loss =      0.694(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.698(CFS)

Total outflow at this depth =      6.70(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      2.770(Ft.)
Pipe friction loss =      1.683(Ft.)
Minor friction loss =      1.086(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      8.379(CFS)

Total outflow at this depth =      8.38(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.770(Ft.)
Pipe friction loss =      2.290(Ft.)
Minor friction loss =      1.478(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      9.775(CFS)

Total outflow at this depth =      9.78(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =   10.00(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.270(Ft.)
Pipe friction loss =      3.201(Ft.)
Minor friction loss =      2.066(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =     11.558(CFS)

Total outflow at this depth =     11.56(CFS)

----------------------------------------------------------------------
Total number of inflow hydrograph intervals = 295
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
----------------------------------------------------------------------
----------------------------------------------------------------------
Initial basin depth =   0.00 (Ft.)
Initial basin storage =      0.00 (Ac.Ft)
Initial basin outflow =   0.00 (CFS)
----------------------------------------------------------------------
----------------------------------------------------------------------
Depth vs. Storage and Depth vs. Discharge data:
 Basin Depth  Storage    Outflow   (S-O*dt/2)   (S+O*dt/2)
     (Ft.)    (Ac.Ft)    (CFS)     (Ac.Ft)    (Ac.Ft)
----------------------------------------------------------------------
```

0.000	0.000	0.000	0.000	0.000
0.500	0.033	0.000	0.033	0.033
1.500	0.130	0.000	0.130	0.130
2.500	0.250	0.000	0.250	0.250
3.500	0.381	0.000	0.381	0.381
4.500	0.516	0.000	0.516	0.516
5.230	0.615	0.000	0.615	0.615
5.500	0.651	0.482	0.649	0.653
6.500	0.782	6.698	0.759	0.805
7.500	0.902	8.379	0.873	0.931
8.500	1.000	9.775	0.966	1.034
10.000	1.098	11.558	1.058	1.138

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	2.9	5.78	8.67	11.56	Depth (Ft.)
0.083	0.00	0.00	0.000	O	|	|	|	|	0.00
0.167	0.00	0.00	0.000	O	|	|	|	|	0.00
0.250	0.00	0.00	0.000	O	|	|	|	|	0.00
0.333	0.00	0.00	0.000	O	|	|	|	|	0.00
0.417	0.00	0.00	0.000	O	|	|	|	|	0.00
0.500	0.00	0.00	0.000	O	|	|	|	|	0.00
0.583	0.00	0.00	0.000	O	|	|	|	|	0.00
0.667	0.00	0.00	0.000	O	|	|	|	|	0.00
0.750	0.00	0.00	0.000	O	|	|	|	|	0.00
0.833	0.00	0.00	0.000	O	|	|	|	|	0.00
0.917	0.00	0.00	0.000	O	|	|	|	|	0.00
1.000	0.00	0.00	0.000	O	|	|	|	|	0.00
1.083	0.00	0.00	0.000	O	|	|	|	|	0.00
1.167	0.00	0.00	0.000	O	|	|	|	|	0.00
1.250	0.00	0.00	0.000	O	|	|	|	|	0.00
1.333	0.00	0.00	0.000	O	|	|	|	|	0.00
1.417	0.00	0.00	0.000	O	|	|	|	|	0.00
1.500	0.00	0.00	0.000	O	|	|	|	|	0.00
1.583	0.00	0.00	0.000	O	|	|	|	|	0.00
1.667	0.00	0.00	0.000	O	|	|	|	|	0.00
1.750	0.00	0.00	0.000	O	|	|	|	|	0.00
1.833	0.00	0.00	0.000	O	|	|	|	|	0.00
1.917	0.00	0.00	0.000	O	|	|	|	|	0.00
2.000	0.00	0.00	0.000	O	|	|	|	|	0.00
2.083	0.00	0.00	0.000	O	|	|	|	|	0.00
2.167	0.00	0.00	0.000	O	|	|	|	|	0.00
2.250	0.00	0.00	0.000	O	|	|	|	|	0.00
2.333	0.00	0.00	0.000	O	|	|	|	|	0.00
2.417	0.00	0.00	0.000	O	|	|	|	|	0.00
2.500	0.00	0.00	0.000	O	|	|	|	|	0.00
2.583	0.00	0.00	0.000	O	|	|	|	|	0.00
2.667	0.00	0.00	0.000	O	|	|	|	|	0.00
2.750	0.00	0.00	0.000	O	|	|	|	|	0.00
2.833	0.00	0.00	0.000	O	|	|	|	|	0.00
2.917	0.00	0.00	0.000	O	|	|	|	|	0.00
3.000	0.00	0.00	0.000	O	|	|	|	|	0.00
3.083	0.00	0.00	0.000	O	|	|	|	|	0.00
3.167	0.00	0.00	0.000	O	|	|	|	|	0.00
3.250	0.00	0.00	0.000	O	|	|	|	|	0.00
3.333	0.00	0.00	0.000	O	|	|	|	|	0.00
3.417	0.00	0.00	0.000	O	|	|	|	|	0.00
3.500	0.00	0.00	0.000	O	|	|	|	|	0.00
3.583	0.00	0.00	0.000	O	|	|	|	|	0.00
3.667	0.00	0.00	0.000	O	|	|	|	|	0.00
3.750	0.00	0.00	0.000	O	|	|	|	|	0.00
3.833	0.00	0.00	0.000	O	|	|	|	|	0.00
3.917	0.00	0.00	0.000	O	|	|	|	|	0.00
4.000	0.00	0.00	0.000	O	|	|	|	|	0.00
4.083	0.00	0.00	0.000	O	|	|	|	|	0.00

4.167	0.00	0.00	0.000	O	|	|	|	0.00
4.250	0.00	0.00	0.000	O	|	|	|	0.00
4.333	0.00	0.00	0.000	O	|	|	|	0.00
4.417	0.00	0.00	0.000	O	|	|	|	0.00
4.500	0.00	0.00	0.000	O	|	|	|	0.00
4.583	0.00	0.00	0.000	O	|	|	|	0.00
4.667	0.00	0.00	0.000	O	|	|	|	0.00
4.750	0.00	0.00	0.000	O	|	|	|	0.00
4.833	0.00	0.00	0.000	O	|	|	|	0.00
4.917	0.00	0.00	0.000	O	|	|	|	0.00
5.000	0.00	0.00	0.000	O	|	|	|	0.00
5.083	0.00	0.00	0.000	O	|	|	|	0.00
5.167	0.00	0.00	0.000	O	|	|	|	0.00
5.250	0.00	0.00	0.000	O	|	|	|	0.00
5.333	0.00	0.00	0.000	O	|	|	|	0.00
5.417	0.00	0.00	0.000	O	|	|	|	0.00
5.500	0.00	0.00	0.000	O	|	|	|	0.00
5.583	0.00	0.00	0.000	O	|	|	|	0.00
5.667	0.00	0.00	0.000	O	|	|	|	0.00
5.750	0.00	0.00	0.000	O	|	|	|	0.00
5.833	0.00	0.00	0.000	O	|	|	|	0.00
5.917	0.00	0.00	0.000	O	|	|	|	0.00
6.000	0.00	0.00	0.000	O	|	|	|	0.00
6.083	0.00	0.00	0.000	O	|	|	|	0.00
6.167	0.00	0.00	0.000	O	|	|	|	0.00
6.250	0.00	0.00	0.000	O	|	|	|	0.00
6.333	0.00	0.00	0.000	O	|	|	|	0.00
6.417	0.00	0.00	0.000	O	|	|	|	0.00
6.500	0.00	0.00	0.000	O	|	|	|	0.00
6.583	0.00	0.00	0.000	O	|	|	|	0.00
6.667	0.00	0.00	0.000	O	|	|	|	0.00
6.750	0.00	0.00	0.000	O	|	|	|	0.00
6.833	0.00	0.00	0.000	O	|	|	|	0.00
6.917	0.00	0.00	0.000	O	|	|	|	0.00
7.000	0.00	0.00	0.000	O	|	|	|	0.00
7.083	0.00	0.00	0.000	O	|	|	|	0.00
7.167	0.00	0.00	0.000	O	|	|	|	0.00
7.250	0.00	0.00	0.000	O	|	|	|	0.00
7.333	0.00	0.00	0.000	O	|	|	|	0.00
7.417	0.00	0.00	0.000	O	|	|	|	0.00
7.500	0.00	0.00	0.000	O	|	|	|	0.00
7.583	0.00	0.00	0.000	O	|	|	|	0.00
7.667	0.00	0.00	0.000	O	|	|	|	0.00
7.750	0.00	0.00	0.000	O	|	|	|	0.00
7.833	0.00	0.00	0.000	O	|	|	|	0.00
7.917	0.00	0.00	0.000	O	|	|	|	0.00
8.000	0.00	0.00	0.000	O	|	|	|	0.00
8.083	0.00	0.00	0.000	O	|	|	|	0.00
8.167	0.00	0.00	0.000	O	|	|	|	0.00
8.250	0.00	0.00	0.000	O	|	|	|	0.00
8.333	0.00	0.00	0.000	O	|	|	|	0.00
8.417	0.00	0.00	0.000	O	|	|	|	0.00
8.500	0.00	0.00	0.000	O	|	|	|	0.00
8.583	0.00	0.00	0.000	O	|	|	|	0.00
8.667	0.00	0.00	0.000	O	|	|	|	0.00
8.750	0.00	0.00	0.000	O	|	|	|	0.00
8.833	0.00	0.00	0.000	O	|	|	|	0.00
8.917	0.00	0.00	0.000	O	|	|	|	0.00
9.000	0.00	0.00	0.000	O	|	|	|	0.00
9.083	0.00	0.00	0.000	O	|	|	|	0.00
9.167	0.00	0.00	0.000	O	|	|	|	0.00
9.250	0.00	0.00	0.000	O	|	|	|	0.00
9.333	0.00	0.00	0.000	O	|	|	|	0.00
9.417	0.00	0.00	0.000	O	|	|	|	0.00
9.500	0.00	0.00	0.000	O	|	|	|	0.00
9.583	0.00	0.00	0.000	O	|	|	|	0.00
9.667	0.00	0.00	0.000	O	|	|	|	0.00
9.750	0.00	0.00	0.000	O	|	|	|	0.00
9.833	0.00	0.00	0.000	O	|	|	|	0.00

9.917	0.00	0.00	0.000	O				0.00
10.000	0.00	0.00	0.000	O				0.00
10.083	0.00	0.00	0.000	O				0.00
10.167	0.00	0.00	0.000	O				0.00
10.250	0.00	0.00	0.000	O				0.00
10.333	0.00	0.00	0.000	O				0.00
10.417	0.00	0.00	0.000	O				0.00
10.500	0.00	0.00	0.000	O				0.00
10.583	0.00	0.00	0.000	O				0.00
10.667	0.00	0.00	0.000	O				0.00
10.750	0.00	0.00	0.000	O				0.00
10.833	0.00	0.00	0.000	O				0.00
10.917	0.00	0.00	0.000	O				0.00
11.000	0.00	0.00	0.000	O				0.00
11.083	0.00	0.00	0.000	O				0.00
11.167	0.00	0.00	0.000	O				0.00
11.250	0.00	0.00	0.000	O				0.00
11.333	0.00	0.00	0.000	O				0.00
11.417	0.00	0.00	0.000	O				0.00
11.500	0.00	0.00	0.000	O				0.00
11.583	0.00	0.00	0.000	O				0.00
11.667	0.00	0.00	0.000	O				0.00
11.750	0.00	0.00	0.000	O				0.00
11.833	0.00	0.00	0.000	O				0.00
11.917	0.00	0.00	0.000	O				0.00
12.000	0.00	0.00	0.000	O				0.00
12.083	0.00	0.00	0.000	O				0.00
12.167	0.00	0.00	0.000	O				0.00
12.250	0.00	0.00	0.000	O				0.00
12.333	0.03	0.00	0.000	O				0.00
12.417	0.05	0.00	0.000	O				0.01
12.500	0.06	0.00	0.001	O				0.01
12.583	0.08	0.00	0.001	O				0.02
12.667	0.08	0.00	0.002	O				0.03
12.750	0.09	0.00	0.002	O				0.04
12.833	0.10	0.00	0.003	O				0.05
12.917	0.11	0.00	0.004	O				0.06
13.000	0.12	0.00	0.005	O				0.07
13.083	0.14	0.00	0.006	O				0.09
13.167	0.15	0.00	0.007	O				0.10
13.250	0.16	0.00	0.008	O				0.12
13.333	0.17	0.00	0.009	O				0.13
13.417	0.19	0.00	0.010	O				0.15
13.500	0.20	0.00	0.011	O				0.17
13.583	0.21	0.00	0.013	O				0.19
13.667	0.23	0.00	0.014	O				0.22
13.750	0.24	0.00	0.016	O				0.24
13.833	0.26	0.00	0.018	O				0.27
13.917	0.28	0.00	0.019	O				0.30
14.000	0.30	0.00	0.021	O				0.33
14.083	0.32	0.00	0.024	O				0.36
14.167	0.34	0.00	0.026	O				0.39
14.250	0.36	0.00	0.028	O				0.43
14.333	0.38	0.00	0.031	OI				0.47
14.417	0.41	0.00	0.033	OI				0.50
14.500	0.43	0.00	0.036	OI				0.53
14.583	0.46	0.00	0.039	OI				0.57
14.667	0.49	0.00	0.043	OI				0.60
14.750	0.53	0.00	0.046	OI				0.64
14.833	0.56	0.00	0.050	OI				0.68
14.917	0.60	0.00	0.054	OI				0.72
15.000	0.65	0.00	0.058	OI				0.76
15.083	0.69	0.00	0.063	OI				0.81
15.167	0.75	0.00	0.068	O I				0.86
15.250	0.81	0.00	0.073	O I				0.91
15.333	0.88	0.00	0.079	O I				0.97
15.417	0.94	0.00	0.085	O I				1.04
15.500	0.92	0.00	0.092	O I				1.10
15.583	0.86	0.00	0.098	O I				1.17

15.667	0.91	0.00	0.104	O I	|	|	|	|	1.23
15.750	1.06	0.00	0.111	O I	|	|	|	|	1.30
15.833	1.28	0.00	0.119	O I	|	|	|	|	1.38
15.917	1.61	0.00	0.129	O I	|	|	|	|	1.49
16.000	2.20	0.00	0.142	O I	|	|	|	|	1.60
16.083	4.13	0.00	0.164	O	I	|	|	|	1.78
16.167	9.31	0.00	0.210	O	|	|	I	|	2.17
16.250	11.56	0.00	0.282	O	|	|	|	I	2.74
16.333	6.46	0.00	0.344	O	|	I	|	|	3.22
16.417	2.89	0.00	0.376	O	I	|	|	|	3.46
16.500	1.51	0.00	0.391	O I	|	|	|	|	3.57
16.583	1.28	0.00	0.401	O I	|	|	|	|	3.65
16.667	0.92	0.00	0.408	O I	|	|	|	|	3.70
16.750	0.79	0.00	0.414	O I	|	|	|	|	3.75
16.833	0.68	0.00	0.419	OI	|	|	|	|	3.78
16.917	0.59	0.00	0.424	OI	|	|	|	|	3.82
17.000	0.52	0.00	0.427	OI	|	|	|	|	3.84
17.083	0.45	0.00	0.431	OI	|	|	|	|	3.87
17.167	0.40	0.00	0.434	OI	|	|	|	|	3.89
17.250	0.35	0.00	0.436	O	|	|	|	|	3.91
17.333	0.31	0.00	0.439	O	|	|	|	|	3.93
17.417	0.27	0.00	0.441	O	|	|	|	|	3.94
17.500	0.24	0.00	0.442	O	|	|	|	|	3.95
17.583	0.21	0.00	0.444	O	|	|	|	|	3.97
17.667	0.18	0.00	0.445	O	|	|	|	|	3.98
17.750	0.16	0.00	0.446	O	|	|	|	|	3.98
17.833	0.13	0.00	0.447	O	|	|	|	|	3.99
17.917	0.11	0.00	0.448	O	|	|	|	|	4.00
18.000	0.09	0.00	0.449	O	|	|	|	|	4.00
18.083	0.06	0.00	0.449	O	|	|	|	|	4.01
18.167	0.00	0.00	0.450	O	|	|	|	|	4.01
18.250	0.00	0.00	0.450	O	|	|	|	|	4.01
18.333	0.00	0.00	0.450	O	|	|	|	|	4.01
18.417	0.00	0.00	0.450	O	|	|	|	|	4.01
18.500	0.00	0.00	0.450	O	|	|	|	|	4.01
18.583	0.00	0.00	0.450	O	|	|	|	|	4.01
18.667	0.00	0.00	0.450	O	|	|	|	|	4.01
18.750	0.00	0.00	0.450	O	|	|	|	|	4.01
18.833	0.00	0.00	0.450	O	|	|	|	|	4.01
18.917	0.00	0.00	0.450	O	|	|	|	|	4.01
19.000	0.00	0.00	0.450	O	|	|	|	|	4.01
19.083	0.00	0.00	0.450	O	|	|	|	|	4.01
19.167	0.00	0.00	0.450	O	|	|	|	|	4.01
19.250	0.00	0.00	0.450	O	|	|	|	|	4.01
19.333	0.00	0.00	0.450	O	|	|	|	|	4.01
19.417	0.00	0.00	0.450	O	|	|	|	|	4.01
19.500	0.00	0.00	0.450	O	|	|	|	|	4.01
19.583	0.00	0.00	0.450	O	|	|	|	|	4.01
19.667	0.00	0.00	0.450	O	|	|	|	|	4.01
19.750	0.00	0.00	0.450	O	|	|	|	|	4.01
19.833	0.00	0.00	0.450	O	|	|	|	|	4.01
19.917	0.00	0.00	0.450	O	|	|	|	|	4.01
20.000	0.00	0.00	0.450	O	|	|	|	|	4.01
20.083	0.00	0.00	0.450	O	|	|	|	|	4.01
20.167	0.00	0.00	0.450	O	|	|	|	|	4.01
20.250	0.00	0.00	0.450	O	|	|	|	|	4.01
20.333	0.00	0.00	0.450	O	|	|	|	|	4.01
20.417	0.00	0.00	0.450	O	|	|	|	|	4.01
20.500	0.00	0.00	0.450	O	|	|	|	|	4.01
20.583	0.00	0.00	0.450	O	|	|	|	|	4.01
20.667	0.00	0.00	0.450	O	|	|	|	|	4.01
20.750	0.00	0.00	0.450	O	|	|	|	|	4.01
20.833	0.00	0.00	0.450	O	|	|	|	|	4.01
20.917	0.00	0.00	0.450	O	|	|	|	|	4.01
21.000	0.00	0.00	0.450	O	|	|	|	|	4.01
21.083	0.00	0.00	0.450	O	|	|	|	|	4.01
21.167	0.00	0.00	0.450	O	|	|	|	|	4.01
21.250	0.00	0.00	0.450	O	|	|	|	|	4.01
21.333	0.00	0.00	0.450	O	|	|	|	|	4.01

21.417	0.00	0.00	0.450	O	|	|	|	|	4.01
21.500	0.00	0.00	0.450	O	|	|	|	|	4.01
21.583	0.00	0.00	0.450	O	|	|	|	|	4.01
21.667	0.00	0.00	0.450	O	|	|	|	|	4.01
21.750	0.00	0.00	0.450	O	|	|	|	|	4.01
21.833	0.00	0.00	0.450	O	|	|	|	|	4.01
21.917	0.00	0.00	0.450	O	|	|	|	|	4.01
22.000	0.00	0.00	0.450	O	|	|	|	|	4.01
22.083	0.00	0.00	0.450	O	|	|	|	|	4.01
22.167	0.00	0.00	0.450	O	|	|	|	|	4.01
22.250	0.00	0.00	0.450	O	|	|	|	|	4.01
22.333	0.00	0.00	0.450	O	|	|	|	|	4.01
22.417	0.00	0.00	0.450	O	|	|	|	|	4.01
22.500	0.00	0.00	0.450	O	|	|	|	|	4.01
22.583	0.00	0.00	0.450	O	|	|	|	|	4.01
22.667	0.00	0.00	0.450	O	|	|	|	|	4.01
22.750	0.00	0.00	0.450	O	|	|	|	|	4.01
22.833	0.00	0.00	0.450	O	|	|	|	|	4.01
22.917	0.00	0.00	0.450	O	|	|	|	|	4.01
23.000	0.00	0.00	0.450	O	|	|	|	|	4.01
23.083	0.00	0.00	0.450	O	|	|	|	|	4.01
23.167	0.00	0.00	0.450	O	|	|	|	|	4.01
23.250	0.00	0.00	0.450	O	|	|	|	|	4.01
23.333	0.00	0.00	0.450	O	|	|	|	|	4.01
23.417	0.00	0.00	0.450	O	|	|	|	|	4.01
23.500	0.00	0.00	0.450	O	|	|	|	|	4.01
23.583	0.00	0.00	0.450	O	|	|	|	|	4.01
23.667	0.00	0.00	0.450	O	|	|	|	|	4.01
23.750	0.00	0.00	0.450	O	|	|	|	|	4.01
23.833	0.00	0.00	0.450	O	|	|	|	|	4.01
23.917	0.00	0.00	0.450	O	|	|	|	|	4.01
24.000	0.00	0.00	0.450	O	|	|	|	|	4.01
24.083	0.00	0.00	0.450	O	|	|	|	|	4.01
24.167	0.00	0.00	0.450	O	|	|	|	|	4.01
24.250	0.00	0.00	0.450	O	|	|	|	|	4.01
24.333	0.00	0.00	0.450	O	|	|	|	|	4.01
24.417	0.00	0.00	0.450	O	|	|	|	|	4.01
24.500	0.00	0.00	0.450	O	|	|	|	|	4.01
24.583	0.00	0.00	0.450	O	|	|	|	|	4.01
24.667	0.00	0.00	0.450	O	|	|	|	|	4.01

Remaining water in basin = 0.45 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 296
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.000 (CFS)
Total volume = 0.000 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.742	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.929	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018
Study date: 04/17/24

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
10-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-17-24

Program License Serial Number 6320

********** HYDROGRAPH INFORMATION **********

From study/file name: DEVHYDA10.rte
**********HYDROGRAPH DATA**********
Number of intervals = 294
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 19.325 (CFS)
Total volume = 2.377 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++++++++++

Process from Point/Station 0.000 to Point/Station 0.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

All flow in excess of 0.74(CFS) is diverted
into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1) is 1.00(Ac.Ft)
++++++++++

P R I N T O F 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	0.2	0.4	0.6	0.7
0+ 5	0.0002	0.03	VQ				
0+10	0.0014	0.18	V	Q			
0+15	0.0041	0.40	V		Q		
0+20	0.0076	0.50	V			Q	
0+25	0.0113	0.54	V			Q	
0+30	0.0151	0.55	V			Q	
0+35	0.0189	0.56	V			Q	
0+40	0.0228	0.56	V			Q	
0+45	0.0266	0.56	V			Q	
0+50	0.0305	0.56	V			Q	
0+55	0.0344	0.56	V			Q	
1+ 0	0.0382	0.56	V			Q	
1+ 5	0.0421	0.57	V			Q	
1+10	0.0460	0.57	V			Q	
1+15	0.0500	0.57	V			Q	
1+20	0.0539	0.57	V			Q	
1+25	0.0578	0.57	V			Q	

```
1+30      0.0618      0.57  |V        |         |         Q         |
1+35      0.0657      0.58  |V        |         |         |Q        |
1+40      0.0697      0.58  | V       |         |         |Q        |
1+45      0.0737      0.58  | V       |         |         |Q        |
1+50      0.0777      0.58  | V       |         |         |Q        |
1+55      0.0817      0.58  | V       |         |         |Q        |
2+ 0      0.0857      0.58  | V       |         |         |Q        |
2+ 5      0.0898      0.59  | V       |         |         |Q        |
2+10      0.0938      0.59  | V       |         |         |Q        |
2+15      0.0979      0.59  | V       |         |         |Q        |
2+20      0.1019      0.59  | V       |         |         |Q        |
2+25      0.1060      0.59  |  V      |         |         |Q        |
2+30      0.1101      0.59  |  V      |         |         | Q       |
2+35      0.1142      0.60  |  V      |         |         | Q       |
2+40      0.1184      0.60  |  V      |         |         | Q       |
2+45      0.1225      0.60  |  V      |         |         | Q       |
2+50      0.1266      0.60  |  V      |         |         | Q       |
2+55      0.1308      0.60  |  V      |         |         | Q       |
3+ 0      0.1350      0.61  |  V      |         |         | Q       |
3+ 5      0.1392      0.61  |   V     |         |         | Q       |
3+10      0.1434      0.61  |   V     |         |         | Q       |
3+15      0.1476      0.61  |   V     |         |         |  Q      |
3+20      0.1518      0.61  |   V     |         |         |  Q      |
3+25      0.1561      0.62  |   V     |         |         |  Q      |
3+30      0.1603      0.62  |   V     |         |         |  Q      |
3+35      0.1646      0.62  |   V     |         |         |  Q      |
3+40      0.1689      0.62  |   V     |         |         |  Q      |
3+45      0.1732      0.63  |    V    |         |         |  Q      |
3+50      0.1775      0.63  |    V    |         |         |  Q      |
3+55      0.1819      0.63  |    V    |         |         |  Q      |
4+ 0      0.1862      0.63  |    V    |         |         |   Q     |
4+ 5      0.1906      0.63  |    V    |         |         |   Q     |
4+10      0.1950      0.64  |    V    |         |         |   Q     |
4+15      0.1994      0.64  |    V    |         |         |   Q     |
4+20      0.2038      0.64  |    V    |         |         |   Q     |
4+25      0.2082      0.64  |     V   |         |         |   Q     |
4+30      0.2126      0.65  |     V   |         |         |   Q     |
4+35      0.2171      0.65  |     V   |         |         |   Q     |
4+40      0.2216      0.65  |     V   |         |         |    Q    |
4+45      0.2261      0.65  |     V   |         |         |    Q    |
4+50      0.2306      0.66  |     V   |         |         |    Q    |
4+55      0.2351      0.66  |     V   |         |         |    Q    |
5+ 0      0.2397      0.66  |     V   |         |         |    Q    |
5+ 5      0.2442      0.66  |      V  |         |         |    Q    |
5+10      0.2488      0.67  |      V  |         |         |    Q    |
5+15      0.2534      0.67  |      V  |         |         |     Q   |
5+20      0.2580      0.67  |      V  |         |         |     Q   |
5+25      0.2627      0.67  |      V  |         |         |     Q   |
5+30      0.2673      0.68  |      V  |         |         |     Q   |
5+35      0.2720      0.68  |      V  |         |         |     Q   |
5+40      0.2767      0.68  |       V |         |         |     Q   |
5+45      0.2814      0.68  |       V |         |         |     Q   |
5+50      0.2861      0.69  |       V |         |         |      Q  |
5+55      0.2909      0.69  |       V |         |         |      Q  |
6+ 0      0.2957      0.69  |       V |         |         |      Q  |
6+ 5      0.3005      0.70  |       V |         |         |      Q  |
6+10      0.3053      0.70  |       V |         |         |      Q  |
6+15      0.3101      0.70  |        V|         |         |      Q  |
6+20      0.3150      0.70  |        V|         |         |       Q |
6+25      0.3198      0.71  |        V|         |         |       Q |
6+30      0.3247      0.71  |        V|         |         |       Q |
6+35      0.3297      0.71  |        V|         |         |       Q |
6+40      0.3346      0.72  |        V|         |         |       Q |
6+45      0.3396      0.72  |        V|         |         |       Q |
6+50      0.3446      0.72  |         V         |         |        Q|
6+55      0.3496      0.73  |         V         |         |        Q|
7+ 0      0.3546      0.73  |         V         |         |        Q|
7+ 5      0.3597      0.73  |         V         |         |        Q|
7+10      0.3647      0.74  |         V         |         |        Q|
```

7+15	0.3698	0.74	V			Q
7+20	0.3750	0.74	V			Q
7+25	0.3801	0.74	V			Q
7+30	0.3852	0.74	V			Q
7+35	0.3903	0.74	V			Q
7+40	0.3954	0.74	V			Q
7+45	0.4005	0.74	V			Q
7+50	0.4056	0.74	V			Q
7+55	0.4107	0.74	V			Q
8+ 0	0.4158	0.74	V			Q
8+ 5	0.4210	0.74	V			Q
8+10	0.4261	0.74	V			Q
8+15	0.4312	0.74	V			Q
8+20	0.4363	0.74	V			Q
8+25	0.4414	0.74	V			Q
8+30	0.4465	0.74	V			Q
8+35	0.4516	0.74	V			Q
8+40	0.4567	0.74	V			Q
8+45	0.4618	0.74	V			Q
8+50	0.4669	0.74	V			Q
8+55	0.4721	0.74	V			Q
9+ 0	0.4772	0.74	V			Q
9+ 5	0.4823	0.74	V			Q
9+10	0.4874	0.74	V			Q
9+15	0.4925	0.74	V			Q
9+20	0.4976	0.74	V			Q
9+25	0.5027	0.74	V			Q
9+30	0.5078	0.74	V			Q
9+35	0.5129	0.74	V			Q
9+40	0.5180	0.74	V			Q
9+45	0.5232	0.74	V			Q
9+50	0.5283	0.74	V			Q
9+55	0.5334	0.74	V			Q
10+ 0	0.5385	0.74	V			Q
10+ 5	0.5436	0.74	V			Q
10+10	0.5487	0.74	V			Q
10+15	0.5538	0.74	V			Q
10+20	0.5589	0.74	V			Q
10+25	0.5640	0.74	V			Q
10+30	0.5691	0.74	V			Q
10+35	0.5743	0.74	V			Q
10+40	0.5794	0.74	V			Q
10+45	0.5845	0.74	V			Q
10+50	0.5896	0.74	V			Q
10+55	0.5947	0.74	V			Q
11+ 0	0.5998	0.74	V			Q
11+ 5	0.6049	0.74	V			Q
11+10	0.6100	0.74	V			Q
11+15	0.6151	0.74	V			Q
11+20	0.6202	0.74	V			Q
11+25	0.6254	0.74	V			Q
11+30	0.6305	0.74	V			Q
11+35	0.6356	0.74	V			Q
11+40	0.6407	0.74	V			Q
11+45	0.6458	0.74	V			Q
11+50	0.6509	0.74	V			Q
11+55	0.6560	0.74	V			Q
12+ 0	0.6611	0.74	V			Q
12+ 5	0.6662	0.74	V			Q
12+10	0.6713	0.74	V			Q
12+15	0.6765	0.74	V			Q
12+20	0.6816	0.74	V			Q
12+25	0.6867	0.74	V			Q
12+30	0.6918	0.74	V			Q
12+35	0.6969	0.74	V			Q
12+40	0.7020	0.74	V			Q
12+45	0.7071	0.74	V			Q
12+50	0.7122	0.74	V			Q
12+55	0.7173	0.74	V			Q

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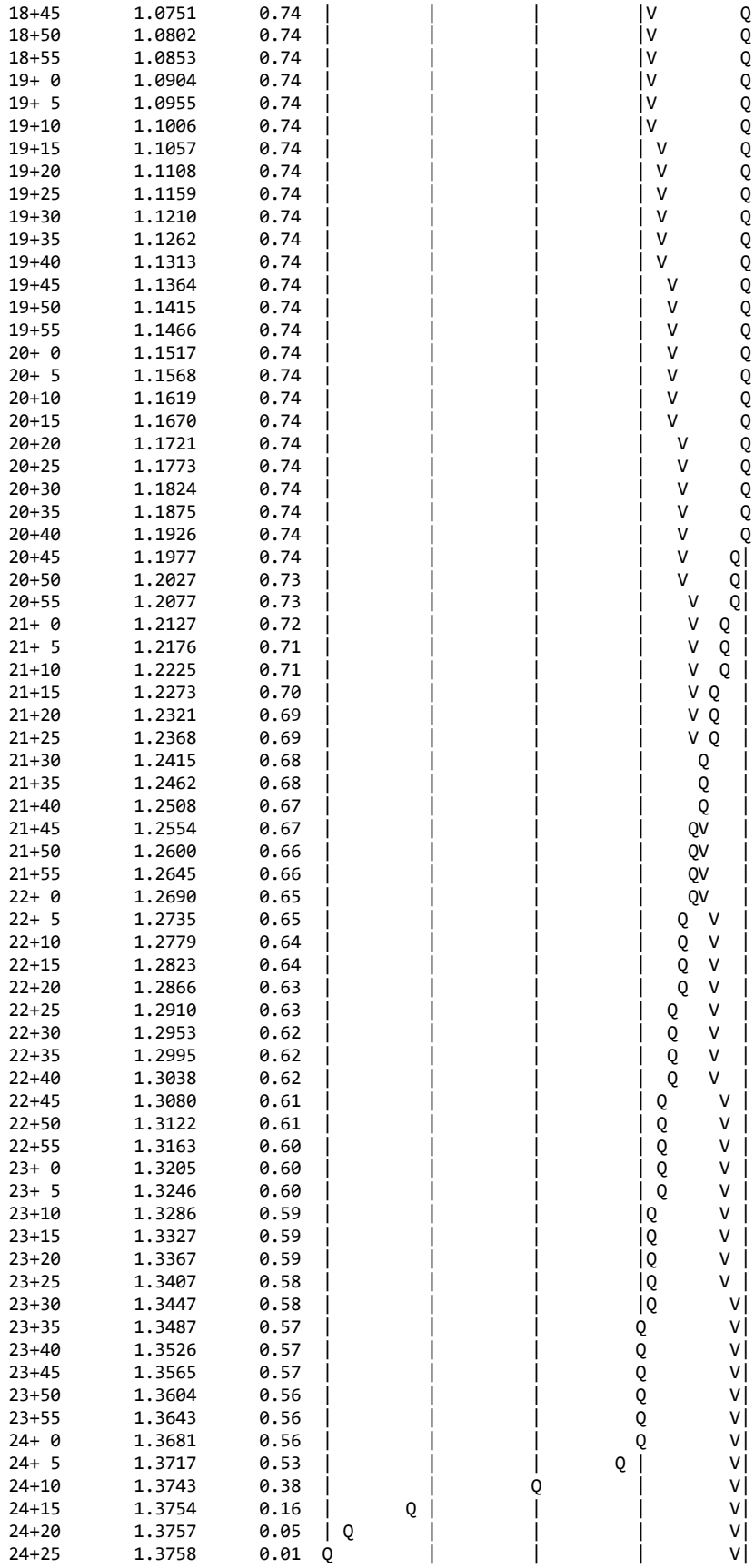
13+ 0       0.7225      0.74  |         |          V        |         Q
13+ 5       0.7276      0.74  |         |         |V        |         Q
13+10       0.7327      0.74  |         |         |V        |         Q
13+15       0.7378      0.74  |         |         |V        |         Q
13+20       0.7429      0.74  |         |         |V        |         Q
13+25       0.7480      0.74  |         |         |V        |         Q
13+30       0.7531      0.74  |         |         |V        |         Q
13+35       0.7582      0.74  |         |         | V       |         Q
13+40       0.7633      0.74  |         |         | V       |         Q
13+45       0.7684      0.74  |         |         | V       |         Q
13+50       0.7736      0.74  |         |         | V       |         Q
13+55       0.7787      0.74  |         |         | V       |         Q
14+ 0       0.7838      0.74  |         |         | V       |         Q
14+ 5       0.7889      0.74  |         |         | V       |         Q
14+10       0.7940      0.74  |         |         |  V      |         Q
14+15       0.7991      0.74  |         |         |  V      |         Q
14+20       0.8042      0.74  |         |         |  V      |         Q
14+25       0.8093      0.74  |         |         |  V      |         Q
14+30       0.8144      0.74  |         |         |  V      |         Q
14+35       0.8195      0.74  |         |         |  V      |         Q
14+40       0.8247      0.74  |         |         |  V      |         Q
14+45       0.8298      0.74  |         |         |   V     |         Q
14+50       0.8349      0.74  |         |         |   V     |         Q
14+55       0.8400      0.74  |         |         |   V     |         Q
15+ 0       0.8451      0.74  |         |         |   V     |         Q
15+ 5       0.8502      0.74  |         |         |   V     |         Q
15+10       0.8553      0.74  |         |         |   V     |         Q
15+15       0.8604      0.74  |         |         |    V    |         Q
15+20       0.8655      0.74  |         |         |    V    |         Q
15+25       0.8706      0.74  |         |         |    V    |         Q
15+30       0.8758      0.74  |         |         |    V    |         Q
15+35       0.8809      0.74  |         |         |    V    |         Q
15+40       0.8860      0.74  |         |         |    V    |         Q
15+45       0.8911      0.74  |         |         |    V    |         Q
15+50       0.8962      0.74  |         |         |     V   |         Q
15+55       0.9013      0.74  |         |         |     V   |         Q
16+ 0       0.9064      0.74  |         |         |     V   |         Q
16+ 5       0.9115      0.74  |         |         |     V   |         Q
16+10       0.9166      0.74  |         |         |     V   |         Q
16+15       0.9217      0.74  |         |         |     V   |         Q
16+20       0.9269      0.74  |         |         |     V   |         Q
16+25       0.9320      0.74  |         |         |      V  |         Q
16+30       0.9371      0.74  |         |         |      V  |         Q
16+35       0.9422      0.74  |         |         |      V  |         Q
16+40       0.9473      0.74  |         |         |      V  |         Q
16+45       0.9524      0.74  |         |         |      V  |         Q
16+50       0.9575      0.74  |         |         |      V  |         Q
16+55       0.9626      0.74  |         |         |      V  |         Q
17+ 0       0.9677      0.74  |         |         |       V |         Q
17+ 5       0.9729      0.74  |         |         |       V |         Q
17+10       0.9780      0.74  |         |         |       V |         Q
17+15       0.9831      0.74  |         |         |       V |         Q
17+20       0.9882      0.74  |         |         |       V |         Q
17+25       0.9933      0.74  |         |         |       V |         Q
17+30       0.9984      0.74  |         |         |        V|         Q
17+35       1.0035      0.74  |         |         |        V|         Q
17+40       1.0086      0.74  |         |         |        V|         Q
17+45       1.0137      0.74  |         |         |        V|         Q
17+50       1.0188      0.74  |         |         |        V|         Q
17+55       1.0240      0.74  |         |         |        V|         Q
18+ 0       1.0291      0.74  |         |         |        V|         Q
18+ 5       1.0342      0.74  |         |         |         V         Q
18+10       1.0393      0.74  |         |         |         V         Q
18+15       1.0444      0.74  |         |         |         V         Q
18+20       1.0495      0.74  |         |         |         V         Q
18+25       1.0546      0.74  |         |         |         V         Q
18+30       1.0597      0.74  |         |         |         V         Q
18+35       1.0648      0.74  |         |         |         V         Q
18+40       1.0699      0.74  |         |         |          V        Q
```


18+45 1.0751 0.74
18+50 1.0802 0.74
18+55 1.0853 0.74
19+ 0 1.0904 0.74
19+ 5 1.0955 0.74
19+10 1.1006 0.74
19+15 1.1057 0.74
19+20 1.1108 0.74
19+25 1.1159 0.74
19+30 1.1210 0.74
19+35 1.1262 0.74
19+40 1.1313 0.74
19+45 1.1364 0.74
19+50 1.1415 0.74
19+55 1.1466 0.74
20+ 0 1.1517 0.74
20+ 5 1.1568 0.74
20+10 1.1619 0.74
20+15 1.1670 0.74
20+20 1.1721 0.74
20+25 1.1773 0.74
20+30 1.1824 0.74
20+35 1.1875 0.74
20+40 1.1926 0.74
20+45 1.1977 0.74
20+50 1.2027 0.73
20+55 1.2077 0.73
21+ 0 1.2127 0.72
21+ 5 1.2176 0.71
21+10 1.2225 0.71
21+15 1.2273 0.70
21+20 1.2321 0.69
21+25 1.2368 0.69
21+30 1.2415 0.68
21+35 1.2462 0.68
21+40 1.2508 0.67
21+45 1.2554 0.67
21+50 1.2600 0.66
21+55 1.2645 0.66
22+ 0 1.2690 0.65
22+ 5 1.2735 0.65
22+10 1.2779 0.64
22+15 1.2823 0.64
22+20 1.2866 0.63
22+25 1.2910 0.63
22+30 1.2953 0.62
22+35 1.2995 0.62
22+40 1.3038 0.62
22+45 1.3080 0.61
22+50 1.3122 0.61
22+55 1.3163 0.60
23+ 0 1.3205 0.60
23+ 5 1.3246 0.60
23+10 1.3286 0.59
23+15 1.3327 0.59
23+20 1.3367 0.59
23+25 1.3407 0.58
23+30 1.3447 0.58
23+35 1.3487 0.57
23+40 1.3526 0.57
23+45 1.3565 0.57
23+50 1.3604 0.56
23+55 1.3643 0.56
24+ 0 1.3681 0.56
24+ 5 1.3717 0.53
24+10 1.3743 0.38
24+15 1.3754 0.16
24+20 1.3757 0.05
24+25 1.3758 0.01

```
  24+30       1.3759      0.01  Q         |         |         |         V
-------------------------------------------------------------------------
       ***************************HYDROGRAPH DATA**************************
                    Number of intervals =   294
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        0.742 (CFS)
                    Total volume =       1.376 (Ac.Ft)
             Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
             Peak (CFS)     18.583     0.000     0.000     0.000     0.000
             Vol (Ac.Ft)      1.001     0.000     0.000     0.000     0.000
       ************************************************************************

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


       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        0.000 to Point/Station        0.000
       **** STORE OR DELETE CURRENT HYDROGRAPH ****
       ________________________________________________________________________
       Current stream hydrograph of   5.0 minute
       intervals has been stored as stream number 2 with
       a starting time of   0.00 hours and ending time of 333.33 hours
       With a total volume of       1.38(Ac.Ft)
       ***************************HYDROGRAPH DATA**************************
                    Number of intervals =     0
                    Time interval =    0.0 (Min.)
                    Maximum/Peak flow rate =        0.000 (CFS)
                    Total volume =       0.000 (Ac.Ft)
             Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
             Peak (CFS)     18.583     0.742     0.000     0.000     0.000
             Vol (Ac.Ft)      1.001     1.376     0.000     0.000     0.000
       ************************************************************************

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


       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        1.000 to Point/Station        1.000
       **** ADD/COMBINE/RECOVER HYDROGRAPHS ****
       ________________________________________________________________________
       From stored stream number 1 the total
       volume of       1.00 (Ac.Ft) is being added to the
       current hydrograph at its original rate from user
       with a delay time to start of addition of    0.00 hours.
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                       P R I N T  O F  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) Add q(CFS)  Tot. Q   0        4.6       9.3      13.9      18.6
  ------------------------------------------------------------------------
    0+ 5       0.0000      0.00  Q         |         |         |         |
    0+10       0.0000      0.00  Q         |         |         |         |
    0+15       0.0000      0.00  Q         |         |         |         |
    0+20       0.0000      0.00  Q         |         |         |         |
    0+25       0.0000      0.00  Q         |         |         |         |
    0+30       0.0000      0.00  Q         |         |         |         |
    0+35       0.0000      0.00  Q         |         |         |         |
    0+40       0.0000      0.00  Q         |         |         |         |
    0+45       0.0000      0.00  Q         |         |         |         |
    0+50       0.0000      0.00  Q         |         |         |         |
    0+55       0.0000      0.00  Q         |         |         |         |
    1+ 0       0.0000      0.00  Q         |         |         |         |
    1+ 5       0.0000      0.00  Q         |         |         |         |
    1+10       0.0000      0.00  Q         |         |         |         |
```

1+15	0.0000	0.00	Q				
1+20	0.0000	0.00	Q				
1+25	0.0000	0.00	Q				
1+30	0.0000	0.00	Q				
1+35	0.0000	0.00	Q				
1+40	0.0000	0.00	Q				
1+45	0.0000	0.00	Q				
1+50	0.0000	0.00	Q				
1+55	0.0000	0.00	Q				
2+ 0	0.0000	0.00	Q				
2+ 5	0.0000	0.00	Q				
2+10	0.0000	0.00	Q				
2+15	0.0000	0.00	Q				
2+20	0.0000	0.00	Q				
2+25	0.0000	0.00	Q				
2+30	0.0000	0.00	Q				
2+35	0.0000	0.00	Q				
2+40	0.0000	0.00	Q				
2+45	0.0000	0.00	Q				
2+50	0.0000	0.00	Q				
2+55	0.0000	0.00	Q				
3+ 0	0.0000	0.00	Q				
3+ 5	0.0000	0.00	Q				
3+10	0.0000	0.00	Q				
3+15	0.0000	0.00	Q				
3+20	0.0000	0.00	Q				
3+25	0.0000	0.00	Q				
3+30	0.0000	0.00	Q				
3+35	0.0000	0.00	Q				
3+40	0.0000	0.00	Q				
3+45	0.0000	0.00	Q				
3+50	0.0000	0.00	Q				
3+55	0.0000	0.00	Q				
4+ 0	0.0000	0.00	Q				
4+ 5	0.0000	0.00	Q				
4+10	0.0000	0.00	Q				
4+15	0.0000	0.00	Q				
4+20	0.0000	0.00	Q				
4+25	0.0000	0.00	Q				
4+30	0.0000	0.00	Q				
4+35	0.0000	0.00	Q				
4+40	0.0000	0.00	Q				
4+45	0.0000	0.00	Q				
4+50	0.0000	0.00	Q				
4+55	0.0000	0.00	Q				
5+ 0	0.0000	0.00	Q				
5+ 5	0.0000	0.00	Q				
5+10	0.0000	0.00	Q				
5+15	0.0000	0.00	Q				
5+20	0.0000	0.00	Q				
5+25	0.0000	0.00	Q				
5+30	0.0000	0.00	Q				
5+35	0.0000	0.00	Q				
5+40	0.0000	0.00	Q				
5+45	0.0000	0.00	Q				
5+50	0.0000	0.00	Q				
5+55	0.0000	0.00	Q				
6+ 0	0.0000	0.00	Q				
6+ 5	0.0000	0.00	Q				
6+10	0.0000	0.00	Q				
6+15	0.0000	0.00	Q				
6+20	0.0000	0.00	Q				
6+25	0.0000	0.00	Q				
6+30	0.0000	0.00	Q				
6+35	0.0000	0.00	Q				
6+40	0.0000	0.00	Q				
6+45	0.0000	0.00	Q				
6+50	0.0000	0.00	Q				
6+55	0.0000	0.00	Q				

7+ 0	0.0000	0.00	Q	|	|	|	|
7+ 5	0.0000	0.00	Q	|	|	|	|
7+10	0.0000	0.00	Q	|	|	|	|
7+15	0.0000	0.00	Q	|	|	|	|
7+20	0.0030	0.00	Q	|	|	|	|
7+25	0.0067	0.01	Q	|	|	|	|
7+30	0.0104	0.01	Q	|	|	|	|
7+35	0.0142	0.01	Q	|	|	|	|
7+40	0.0179	0.02	Q	|	|	|	|
7+45	0.0218	0.02	Q	|	|	|	|
7+50	0.0257	0.03	Q	|	|	|	|
7+55	0.0297	0.03	Q	|	|	|	|
8+ 0	0.0337	0.03	Q	|	|	|	|
8+ 5	0.0379	0.04	Q	|	|	|	|
8+10	0.0420	0.04	Q	|	|	|	|
8+15	0.0463	0.05	Q	|	|	|	|
8+20	0.0505	0.05	Q	|	|	|	|
8+25	0.0550	0.05	Q	|	|	|	|
8+30	0.0594	0.06	Q	|	|	|	|
8+35	0.0639	0.06	Q	|	|	|	|
8+40	0.0685	0.07	Q	|	|	|	|
8+45	0.0732	0.07	Q	|	|	|	|
8+50	0.0779	0.08	Q	|	|	|	|
8+55	0.0828	0.08	Q	|	|	|	|
9+ 0	0.0876	0.09	Q	|	|	|	|
9+ 5	0.0927	0.09	Q	|	|	|	|
9+10	0.0977	0.10	Q	|	|	|	|
9+15	0.1030	0.10	Q	|	|	|	|
9+20	0.1082	0.11	Q	|	|	|	|
9+25	0.1136	0.11	Q	|	|	|	|
9+30	0.1190	0.12	Q	|	|	|	|
9+35	0.1247	0.12	Q	|	|	|	|
9+40	0.1303	0.13	Q	|	|	|	|
9+45	0.1362	0.14	Q	|	|	|	|
9+50	0.1420	0.14	Q	|	|	|	|
9+55	0.1481	0.15	Q	|	|	|	|
10+ 0	0.1542	0.15	Q	|	|	|	|
10+ 5	0.1606	0.16	Q	|	|	|	|
10+10	0.1669	0.17	Q	|	|	|	|
10+15	0.1735	0.17	Q	|	|	|	|
10+20	0.1801	0.18	Q	|	|	|	|
10+25	0.1870	0.19	Q	|	|	|	|
10+30	0.1939	0.19	Q	|	|	|	|
10+35	0.2011	0.20	Q	|	|	|	|
10+40	0.2084	0.21	Q	|	|	|	|
10+45	0.2159	0.22	Q	|	|	|	|
10+50	0.2235	0.22	Q	|	|	|	|
10+55	0.2314	0.23	Q	|	|	|	|
11+ 0	0.2393	0.24	Q	|	|	|	|
11+ 5	0.2476	0.25	Q	|	|	|	|
11+10	0.2559	0.26	Q	|	|	|	|
11+15	0.2646	0.26	Q	|	|	|	|
11+20	0.2734	0.27	Q	|	|	|	|
11+25	0.2825	0.28	Q	|	|	|	|
11+30	0.2918	0.29	Q	|	|	|	|
11+35	0.3014	0.30	Q	|	|	|	|
11+40	0.3112	0.31	Q	|	|	|	|
11+45	0.3214	0.32	Q	|	|	|	|
11+50	0.3317	0.33	Q	|	|	|	|
11+55	0.3425	0.34	Q	|	|	|	|
12+ 0	0.3534	0.35	Q	|	|	|	|
12+ 5	0.3682	0.37	Q	|	|	|	|
12+10	0.3979	0.40	Q	|	|	|	|
12+15	0.4368	0.44	Q	|	|	|	|
12+20	0.4621	0.46	Q	|	|	|	|
12+25	0.4792	0.48	|Q	|	|	|	|
12+30	0.4933	0.49	|Q	|	|	|	|
12+35	0.5079	0.51	|Q	|	|	|	|
12+40	0.5220	0.52	|Q	|	|	|	|

12+45	0.5369	0.54	Q				
12+50	0.5520	0.55	Q				
12+55	0.5680	0.57	Q				
13+ 0	0.5842	0.58	Q				
13+ 5	0.6015	0.60	Q				
13+10	0.6191	0.62	Q				
13+15	0.6378	0.64	Q				
13+20	0.6569	0.66	Q				
13+25	0.6773	0.68	Q				
13+30	0.6981	0.70	Q				
13+35	0.7204	0.72	Q				
13+40	0.7432	0.74	Q				
13+45	0.7677	0.77	Q				
13+50	0.7930	0.79	Q				
13+55	0.8201	0.82	Q				
14+ 0	0.8481	0.85	Q				
14+ 5	0.8784	0.88	Q				
14+10	0.9102	0.91	Q				
14+15	0.9447	0.94	Q				
14+20	0.9804	0.98	Q				
14+25	1.0192	1.02	Q				
14+30	1.0598	1.06	Q				
14+35	1.1044	1.10	Q				
14+40	1.1515	1.15	Q				
14+45	1.2036	1.20	Q				
14+50	1.2591	1.26	Q				
14+55	1.3210	1.32	Q				
15+ 0	1.3878	1.39	Q				
15+ 5	1.4631	1.46	Q				
15+10	1.5456	1.55	Q				
15+15	1.6401	1.64	Q				
15+20	1.7459	1.75	Q				
15+25	1.8387	1.84	Q				
15+30	1.8115	1.81	Q				
15+35	1.7343	1.73	Q				
15+40	1.8177	1.82	Q				
15+45	2.0436	2.04	Q				
15+50	2.3886	2.39	Q				
15+55	2.9249	2.92	Q				
16+ 0	4.0077	4.01	Q				
16+ 5	7.4259	7.43		Q			
16+10	15.5467	15.55				Q	
16+15	18.5830	18.58					Q
16+20	10.4779	10.48			Q		
16+25	4.8864	4.89		Q			
16+30	2.7569	2.76	Q				
16+35	2.3661	2.37	Q				
16+40	1.8144	1.81	Q				
16+45	1.6122	1.61	Q				
16+50	1.4421	1.44	Q				
16+55	1.3068	1.31	Q				
17+ 0	1.1903	1.19	Q				
17+ 5	1.0921	1.09	Q				
17+10	1.0077	1.01	Q				
17+15	0.9339	0.93	Q				
17+20	0.8691	0.87	Q				
17+25	0.8114	0.81	Q				
17+30	0.7597	0.76	Q				
17+35	0.7130	0.71	Q				
17+40	0.6704	0.67	Q				
17+45	0.6314	0.63	Q				
17+50	0.5955	0.60	Q				
17+55	0.5624	0.56	Q				
18+ 0	0.5316	0.53	Q				
18+ 5	0.4996	0.50	Q				
18+10	0.4546	0.45	Q				
18+15	0.4030	0.40	Q				
18+20	0.3664	0.37	Q				
18+25	0.3402	0.34	Q				

18+30	0.3183	0.32	Q				
18+35	0.2979	0.30	Q				
18+40	0.2791	0.28	Q				
18+45	0.2614	0.26	Q				
18+50	0.2445	0.24	Q				
18+55	0.2284	0.23	Q				
19+ 0	0.2131	0.21	Q				
19+ 5	0.1984	0.20	Q				
19+10	0.1844	0.18	Q				
19+15	0.1710	0.17	Q				
19+20	0.1581	0.16	Q				
19+25	0.1458	0.15	Q				
19+30	0.1339	0.13	Q				
19+35	0.1225	0.12	Q				
19+40	0.1115	0.11	Q				
19+45	0.1010	0.10	Q				
19+50	0.0907	0.09	Q				
19+55	0.0809	0.08	Q				
20+ 0	0.0714	0.07	Q				
20+ 5	0.0622	0.06	Q				
20+10	0.0533	0.05	Q				
20+15	0.0446	0.04	Q				
20+20	0.0363	0.04	Q				
20+25	0.0282	0.03	Q				
20+30	0.0203	0.02	Q				
20+35	0.0127	0.01	Q				
20+40	0.0053	0.01	Q				
20+45	0.0000	0.00	Q				
20+50	0.0000	0.00	Q				
20+55	0.0000	0.00	Q				
21+ 0	0.0000	0.00	Q				
21+ 5	0.0000	0.00	Q				
21+10	0.0000	0.00	Q				
21+15	0.0000	0.00	Q				
21+20	0.0000	0.00	Q				
21+25	0.0000	0.00	Q				
21+30	0.0000	0.00	Q				
21+35	0.0000	0.00	Q				
21+40	0.0000	0.00	Q				
21+45	0.0000	0.00	Q				
21+50	0.0000	0.00	Q				
21+55	0.0000	0.00	Q				
22+ 0	0.0000	0.00	Q				
22+ 5	0.0000	0.00	Q				
22+10	0.0000	0.00	Q				
22+15	0.0000	0.00	Q				
22+20	0.0000	0.00	Q				
22+25	0.0000	0.00	Q				
22+30	0.0000	0.00	Q				
22+35	0.0000	0.00	Q				
22+40	0.0000	0.00	Q				
22+45	0.0000	0.00	Q				
22+50	0.0000	0.00	Q				
22+55	0.0000	0.00	Q				
23+ 0	0.0000	0.00	Q				
23+ 5	0.0000	0.00	Q				
23+10	0.0000	0.00	Q				
23+15	0.0000	0.00	Q				
23+20	0.0000	0.00	Q				
23+25	0.0000	0.00	Q				
23+30	0.0000	0.00	Q				
23+35	0.0000	0.00	Q				
23+40	0.0000	0.00	Q				
23+45	0.0000	0.00	Q				
23+50	0.0000	0.00	Q				
23+55	0.0000	0.00	Q				
24+ 0	0.0000	0.00	Q				
24+ 5	0.0000	0.00	Q				
24+10	0.0000	0.00	Q				

```
   24+15       0.0000      0.00  Q         |         |         |         |
   24+20       0.0000      0.00  Q         |         |         |         |
   24+25       0.0000      0.00  Q         |         |         |         |
   24+30       0.0000      0.00  Q         |         |         |         |
   24+35       0.0000      0.00  Q         |         |         |         |
-------------------------------------------------------------------------
        ****************************HYDROGRAPH DATA****************************
                      Number of intervals =   295
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =       18.583 (CFS)
                      Total volume =       1.001 (Ac.Ft)
               Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
               Peak (CFS)      0.000     0.742     0.000     0.000     0.000
               Vol (Ac.Ft)      0.000     1.376     0.000     0.000     0.000
        *************************************************************************

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


        +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
        Process from Point/Station        0.000 to Point/Station        1.000
        **** RETARDING BASIN ROUTING ****
        _____________________________________________________________________

        Program computation of outflow v. depth




        CALCULATED OUTFLOW DATA AT DEPTH =    0.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.23(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
        Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
        Manning's N = 0.013   No. of pipes = 1
        Given pipe size =     15.00(In.)
        Calculated individual pipe flow  =     0.482(CFS)
        Normal flow depth in pipe =    3.29(In.)
        Flow top width inside pipe =   12.42(In.)
        Critical Depth =    0.27(Ft.)
        Calculated flow rate through pipe(s) =      0.482(CFS)

        Total outflow at this depth =      0.48(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
```

```
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.770(Ft.)
Pipe friction loss =      1.075(Ft.)
Minor friction loss =      0.694(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.698(CFS)

Total outflow at this depth =      6.70(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      2.770(Ft.)
Pipe friction loss =      1.683(Ft.)
Minor friction loss =      1.086(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      8.379(CFS)

Total outflow at this depth =      8.38(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.770(Ft.)
Pipe friction loss =      2.290(Ft.)
Minor friction loss =      1.478(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      9.775(CFS)

Total outflow at this depth =      9.78(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =   10.00(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.270(Ft.)
Pipe friction loss =      3.201(Ft.)
Minor friction loss =      2.066(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =     11.558(CFS)

Total outflow at this depth =     11.56(CFS)

----------------------------------------------------------------------
Total number of inflow hydrograph intervals = 295
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
----------------------------------------------------------------------
----------------------------------------------------------------------
Initial basin depth =   0.00 (Ft.)
Initial basin storage =      0.00 (Ac.Ft)
Initial basin outflow =   0.00 (CFS)
----------------------------------------------------------------------
----------------------------------------------------------------------
Depth vs. Storage and Depth vs. Discharge data:
 Basin Depth  Storage    Outflow   (S-O*dt/2)   (S+O*dt/2)
     (Ft.)    (Ac.Ft)    (CFS)     (Ac.Ft)    (Ac.Ft)
----------------------------------------------------------------------
```

0.000	0.000	0.000	0.000	0.000
0.500	0.033	0.000	0.033	0.033
1.500	0.130	0.000	0.130	0.130
2.500	0.250	0.000	0.250	0.250
3.500	0.381	0.000	0.381	0.381
4.500	0.516	0.000	0.516	0.516
5.230	0.615	0.000	0.615	0.615
5.500	0.651	0.482	0.649	0.653
6.500	0.782	6.698	0.759	0.805
7.500	0.902	8.379	0.873	0.931
8.500	1.000	9.775	0.966	1.034
10.000	1.098	11.558	1.058	1.138

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 4.6 9.29 13.94 18.58	Depth (Ft.)
0.083	0.00	0.00	0.000	O | | | |	0.00
0.167	0.00	0.00	0.000	O | | | |	0.00
0.250	0.00	0.00	0.000	O | | | |	0.00
0.333	0.00	0.00	0.000	O | | | |	0.00
0.417	0.00	0.00	0.000	O | | | |	0.00
0.500	0.00	0.00	0.000	O | | | |	0.00
0.583	0.00	0.00	0.000	O | | | |	0.00
0.667	0.00	0.00	0.000	O | | | |	0.00
0.750	0.00	0.00	0.000	O | | | |	0.00
0.833	0.00	0.00	0.000	O | | | |	0.00
0.917	0.00	0.00	0.000	O | | | |	0.00
1.000	0.00	0.00	0.000	O | | | |	0.00
1.083	0.00	0.00	0.000	O | | | |	0.00
1.167	0.00	0.00	0.000	O | | | |	0.00
1.250	0.00	0.00	0.000	O | | | |	0.00
1.333	0.00	0.00	0.000	O | | | |	0.00
1.417	0.00	0.00	0.000	O | | | |	0.00
1.500	0.00	0.00	0.000	O | | | |	0.00
1.583	0.00	0.00	0.000	O | | | |	0.00
1.667	0.00	0.00	0.000	O | | | |	0.00
1.750	0.00	0.00	0.000	O | | | |	0.00
1.833	0.00	0.00	0.000	O | | | |	0.00
1.917	0.00	0.00	0.000	O | | | |	0.00
2.000	0.00	0.00	0.000	O | | | |	0.00
2.083	0.00	0.00	0.000	O | | | |	0.00
2.167	0.00	0.00	0.000	O | | | |	0.00
2.250	0.00	0.00	0.000	O | | | |	0.00
2.333	0.00	0.00	0.000	O | | | |	0.00
2.417	0.00	0.00	0.000	O | | | |	0.00
2.500	0.00	0.00	0.000	O | | | |	0.00
2.583	0.00	0.00	0.000	O | | | |	0.00
2.667	0.00	0.00	0.000	O | | | |	0.00
2.750	0.00	0.00	0.000	O | | | |	0.00
2.833	0.00	0.00	0.000	O | | | |	0.00
2.917	0.00	0.00	0.000	O | | | |	0.00
3.000	0.00	0.00	0.000	O | | | |	0.00
3.083	0.00	0.00	0.000	O | | | |	0.00
3.167	0.00	0.00	0.000	O | | | |	0.00
3.250	0.00	0.00	0.000	O | | | |	0.00
3.333	0.00	0.00	0.000	O | | | |	0.00
3.417	0.00	0.00	0.000	O | | | |	0.00
3.500	0.00	0.00	0.000	O | | | |	0.00
3.583	0.00	0.00	0.000	O | | | |	0.00
3.667	0.00	0.00	0.000	O | | | |	0.00
3.750	0.00	0.00	0.000	O | | | |	0.00
3.833	0.00	0.00	0.000	O | | | |	0.00
3.917	0.00	0.00	0.000	O | | | |	0.00
4.000	0.00	0.00	0.000	O | | | |	0.00
4.083	0.00	0.00	0.000	O | | | |	0.00

4.167	0.00	0.00	0.000	O	|	|	|	0.00
4.250	0.00	0.00	0.000	O	|	|	|	0.00
4.333	0.00	0.00	0.000	O	|	|	|	0.00
4.417	0.00	0.00	0.000	O	|	|	|	0.00
4.500	0.00	0.00	0.000	O	|	|	|	0.00
4.583	0.00	0.00	0.000	O	|	|	|	0.00
4.667	0.00	0.00	0.000	O	|	|	|	0.00
4.750	0.00	0.00	0.000	O	|	|	|	0.00
4.833	0.00	0.00	0.000	O	|	|	|	0.00
4.917	0.00	0.00	0.000	O	|	|	|	0.00
5.000	0.00	0.00	0.000	O	|	|	|	0.00
5.083	0.00	0.00	0.000	O	|	|	|	0.00
5.167	0.00	0.00	0.000	O	|	|	|	0.00
5.250	0.00	0.00	0.000	O	|	|	|	0.00
5.333	0.00	0.00	0.000	O	|	|	|	0.00
5.417	0.00	0.00	0.000	O	|	|	|	0.00
5.500	0.00	0.00	0.000	O	|	|	|	0.00
5.583	0.00	0.00	0.000	O	|	|	|	0.00
5.667	0.00	0.00	0.000	O	|	|	|	0.00
5.750	0.00	0.00	0.000	O	|	|	|	0.00
5.833	0.00	0.00	0.000	O	|	|	|	0.00
5.917	0.00	0.00	0.000	O	|	|	|	0.00
6.000	0.00	0.00	0.000	O	|	|	|	0.00
6.083	0.00	0.00	0.000	O	|	|	|	0.00
6.167	0.00	0.00	0.000	O	|	|	|	0.00
6.250	0.00	0.00	0.000	O	|	|	|	0.00
6.333	0.00	0.00	0.000	O	|	|	|	0.00
6.417	0.00	0.00	0.000	O	|	|	|	0.00
6.500	0.00	0.00	0.000	O	|	|	|	0.00
6.583	0.00	0.00	0.000	O	|	|	|	0.00
6.667	0.00	0.00	0.000	O	|	|	|	0.00
6.750	0.00	0.00	0.000	O	|	|	|	0.00
6.833	0.00	0.00	0.000	O	|	|	|	0.00
6.917	0.00	0.00	0.000	O	|	|	|	0.00
7.000	0.00	0.00	0.000	O	|	|	|	0.00
7.083	0.00	0.00	0.000	O	|	|	|	0.00
7.167	0.00	0.00	0.000	O	|	|	|	0.00
7.250	0.00	0.00	0.000	O	|	|	|	0.00
7.333	0.00	0.00	0.000	O	|	|	|	0.00
7.417	0.01	0.00	0.000	O	|	|	|	0.00
7.500	0.01	0.00	0.000	O	|	|	|	0.00
7.583	0.01	0.00	0.000	O	|	|	|	0.00
7.667	0.02	0.00	0.000	O	|	|	|	0.00
7.750	0.02	0.00	0.000	O	|	|	|	0.01
7.833	0.03	0.00	0.001	O	|	|	|	0.01
7.917	0.03	0.00	0.001	O	|	|	|	0.01
8.000	0.03	0.00	0.001	O	|	|	|	0.02
8.083	0.04	0.00	0.001	O	|	|	|	0.02
8.167	0.04	0.00	0.002	O	|	|	|	0.02
8.250	0.05	0.00	0.002	O	|	|	|	0.03
8.333	0.05	0.00	0.002	O	|	|	|	0.03
8.417	0.05	0.00	0.003	O	|	|	|	0.04
8.500	0.06	0.00	0.003	O	|	|	|	0.04
8.583	0.06	0.00	0.003	O	|	|	|	0.05
8.667	0.07	0.00	0.004	O	|	|	|	0.06
8.750	0.07	0.00	0.004	O	|	|	|	0.07
8.833	0.08	0.00	0.005	O	|	|	|	0.07
8.917	0.08	0.00	0.005	O	|	|	|	0.08
9.000	0.09	0.00	0.006	O	|	|	|	0.09
9.083	0.09	0.00	0.007	O	|	|	|	0.10
9.167	0.10	0.00	0.007	O	|	|	|	0.11
9.250	0.10	0.00	0.008	O	|	|	|	0.12
9.333	0.11	0.00	0.009	O	|	|	|	0.13
9.417	0.11	0.00	0.009	O	|	|	|	0.14
9.500	0.12	0.00	0.010	O	|	|	|	0.15
9.583	0.12	0.00	0.011	O	|	|	|	0.17
9.667	0.13	0.00	0.012	O	|	|	|	0.18
9.750	0.14	0.00	0.013	O	|	|	|	0.19
9.833	0.14	0.00	0.014	O	|	|	|	0.21

9.917	0.15	0.00	0.015	O	|	|	|	0.22
10.000	0.15	0.00	0.016	O	|	|	|	0.24
10.083	0.16	0.00	0.017	O	|	|	|	0.26
10.167	0.17	0.00	0.018	O	|	|	|	0.27
10.250	0.17	0.00	0.019	O	|	|	|	0.29
10.333	0.18	0.00	0.020	O	|	|	|	0.31
10.417	0.19	0.00	0.022	O	|	|	|	0.33
10.500	0.19	0.00	0.023	O	|	|	|	0.35
10.583	0.20	0.00	0.024	O	|	|	|	0.37
10.667	0.21	0.00	0.026	O	|	|	|	0.39
10.750	0.22	0.00	0.027	O	|	|	|	0.41
10.833	0.22	0.00	0.029	O	|	|	|	0.44
10.917	0.23	0.00	0.030	O	|	|	|	0.46
11.000	0.24	0.00	0.032	O	|	|	|	0.48
11.083	0.25	0.00	0.034	O	|	|	|	0.51
11.167	0.26	0.00	0.035	O	|	|	|	0.52
11.250	0.26	0.00	0.037	O	|	|	|	0.54
11.333	0.27	0.00	0.039	O	|	|	|	0.56
11.417	0.28	0.00	0.041	O	|	|	|	0.58
11.500	0.29	0.00	0.043	O	|	|	|	0.60
11.583	0.30	0.00	0.045	O	|	|	|	0.62
11.667	0.31	0.00	0.047	O	|	|	|	0.64
11.750	0.32	0.00	0.049	O	|	|	|	0.67
11.833	0.33	0.00	0.051	O	|	|	|	0.69
11.917	0.34	0.00	0.054	O	|	|	|	0.71
12.000	0.35	0.00	0.056	O	|	|	|	0.74
12.083	0.37	0.00	0.059	O	|	|	|	0.76
12.167	0.40	0.00	0.061	O	|	|	|	0.79
12.250	0.44	0.00	0.064	O	|	|	|	0.82
12.333	0.46	0.00	0.067	O	|	|	|	0.85
12.417	0.48	0.00	0.071	O	|	|	|	0.89
12.500	0.49	0.00	0.074	O	|	|	|	0.92
12.583	0.51	0.00	0.077	O	|	|	|	0.96
12.667	0.52	0.00	0.081	O	|	|	|	0.99
12.750	0.54	0.00	0.085	O	|	|	|	1.03
12.833	0.55	0.00	0.088	O	|	|	|	1.07
12.917	0.57	0.00	0.092	O	|	|	|	1.11
13.000	0.58	0.00	0.096	OI	|	|	|	1.15
13.083	0.60	0.00	0.100	OI	|	|	|	1.19
13.167	0.62	0.00	0.104	OI	|	|	|	1.24
13.250	0.64	0.00	0.109	OI	|	|	|	1.28
13.333	0.66	0.00	0.113	OI	|	|	|	1.33
13.417	0.68	0.00	0.118	OI	|	|	|	1.37
13.500	0.70	0.00	0.122	OI	|	|	|	1.42
13.583	0.72	0.00	0.127	OI	|	|	|	1.47
13.667	0.74	0.00	0.132	OI	|	|	|	1.52
13.750	0.77	0.00	0.138	OI	|	|	|	1.56
13.833	0.79	0.00	0.143	OI	|	|	|	1.61
13.917	0.82	0.00	0.149	OI	|	|	|	1.65
14.000	0.85	0.00	0.154	OI	|	|	|	1.70
14.083	0.88	0.00	0.160	OI	|	|	|	1.75
14.167	0.91	0.00	0.166	OI	|	|	|	1.80
14.250	0.94	0.00	0.173	OI	|	|	|	1.86
14.333	0.98	0.00	0.179	OI	|	|	|	1.91
14.417	1.02	0.00	0.186	OI	|	|	|	1.97
14.500	1.06	0.00	0.193	OI	|	|	|	2.03
14.583	1.10	0.00	0.201	OI	|	|	|	2.09
14.667	1.15	0.00	0.209	OI	|	|	|	2.16
14.750	1.20	0.00	0.217	O I	|	|	|	2.22
14.833	1.26	0.00	0.225	O I	|	|	|	2.29
14.917	1.32	0.00	0.234	O I	|	|	|	2.37
15.000	1.39	0.00	0.243	O I	|	|	|	2.45
15.083	1.46	0.00	0.253	O I	|	|	|	2.53
15.167	1.55	0.00	0.264	O I	|	|	|	2.60
15.250	1.64	0.00	0.275	O I	|	|	|	2.69
15.333	1.75	0.00	0.286	O I	|	|	|	2.78
15.417	1.84	0.00	0.299	O I	|	|	|	2.87
15.500	1.81	0.00	0.311	O I	|	|	|	2.97
15.583	1.73	0.00	0.323	O I	|	|	|	3.06

15.667	1.82	0.00	0.336	O I	|	|	|	|	3.15
15.750	2.04	0.00	0.349	O I	|	|	|	|	3.26
15.833	2.39	0.00	0.364	O I	|	|	|	|	3.37
15.917	2.92	0.00	0.383	O I	|	|	|	|	3.51
16.000	4.01	0.00	0.406	O I	|	|	|	|	3.69
16.083	7.43	0.00	0.446	O |	I	|	|	|	3.98
16.167	15.55	0.00	0.525	O |	|	|	I	|	4.57
16.250	18.58	0.35	0.641	O |	|	|	|	I	5.43
16.333	10.48	4.05	0.726	| O	|	I	|	|	6.07
16.417	4.89	5.07	0.748	| O	|	|	|	|	6.24
16.500	2.76	4.72	0.740	| I O	|	|	|	|	6.18
16.583	2.37	4.11	0.727	| I O	|	|	|	|	6.08
16.667	1.81	3.54	0.716	| I O	|	|	|	|	5.99
16.750	1.61	3.03	0.705	| I O	|	|	|	|	5.91
16.833	1.44	2.61	0.696	| I O	|	|	|	|	5.84
16.917	1.31	2.26	0.688	| IO	|	|	|	|	5.79
17.000	1.19	1.98	0.682	| IO	|	|	|	|	5.74
17.083	1.09	1.74	0.678	|IO	|	|	|	|	5.70
17.167	1.01	1.55	0.673	|IO	|	|	|	|	5.67
17.250	0.93	1.39	0.670	|IO	|	|	|	|	5.65
17.333	0.87	1.25	0.667	|IO	|	|	|	|	5.62
17.417	0.81	1.13	0.665	|O	|	|	|	|	5.60
17.500	0.76	1.04	0.663	|O	|	|	|	|	5.59
17.583	0.71	0.95	0.661	|O	|	|	|	|	5.58
17.667	0.67	0.88	0.659	|O	|	|	|	|	5.56
17.750	0.63	0.81	0.658	|O	|	|	|	|	5.55
17.833	0.60	0.76	0.657	|O	|	|	|	|	5.54
17.917	0.56	0.71	0.656	IO	|	|	|	|	5.54
18.000	0.53	0.66	0.655	IO	|	|	|	|	5.53
18.083	0.50	0.62	0.654	IO	|	|	|	|	5.52
18.167	0.45	0.58	0.653	IO	|	|	|	|	5.52
18.250	0.40	0.54	0.652	O	|	|	|	|	5.51
18.333	0.37	0.50	0.651	O	|	|	|	|	5.50
18.417	0.34	0.47	0.650	O	|	|	|	|	5.50
18.500	0.32	0.46	0.649	O	|	|	|	|	5.49
18.583	0.30	0.45	0.648	O	|	|	|	|	5.48
18.667	0.28	0.43	0.647	O	|	|	|	|	5.47
18.750	0.26	0.42	0.646	O	|	|	|	|	5.46
18.833	0.24	0.40	0.645	O	|	|	|	|	5.46
18.917	0.23	0.39	0.644	O	|	|	|	|	5.45
19.000	0.21	0.37	0.643	O	|	|	|	|	5.44
19.083	0.20	0.36	0.642	O	|	|	|	|	5.43
19.167	0.18	0.34	0.641	O	|	|	|	|	5.42
19.250	0.17	0.33	0.640	O	|	|	|	|	5.41
19.333	0.16	0.32	0.639	O	|	|	|	|	5.41
19.417	0.15	0.30	0.637	O	|	|	|	|	5.40
19.500	0.13	0.29	0.636	O	|	|	|	|	5.39
19.583	0.12	0.27	0.635	O	|	|	|	|	5.38
19.667	0.11	0.26	0.634	O	|	|	|	|	5.38
19.750	0.10	0.25	0.633	O	|	|	|	|	5.37
19.833	0.09	0.23	0.632	O	|	|	|	|	5.36
19.917	0.08	0.22	0.631	O	|	|	|	|	5.35
20.000	0.07	0.21	0.630	O	|	|	|	|	5.35
20.083	0.06	0.19	0.630	O	|	|	|	|	5.34
20.167	0.05	0.18	0.629	O	|	|	|	|	5.33
20.250	0.04	0.17	0.628	O	|	|	|	|	5.33
20.333	0.04	0.16	0.627	O	|	|	|	|	5.32
20.417	0.03	0.15	0.626	O	|	|	|	|	5.31
20.500	0.02	0.14	0.625	O	|	|	|	|	5.31
20.583	0.01	0.13	0.624	O	|	|	|	|	5.30
20.667	0.01	0.12	0.624	O	|	|	|	|	5.30
20.750	0.00	0.11	0.623	O	|	|	|	|	5.29
20.833	0.00	0.10	0.622	O	|	|	|	|	5.28
20.917	0.00	0.09	0.622	O	|	|	|	|	5.28
21.000	0.00	0.08	0.621	O	|	|	|	|	5.28
21.083	0.00	0.07	0.620	O	|	|	|	|	5.27
21.167	0.00	0.07	0.620	O	|	|	|	|	5.27
21.250	0.00	0.06	0.620	O	|	|	|	|	5.26
21.333	0.00	0.06	0.619	O	|	|	|	|	5.26

21.417	0.00	0.05	0.619	O	|	|	|	|	5.26
21.500	0.00	0.05	0.618	O	|	|	|	|	5.26
21.583	0.00	0.04	0.618	O	|	|	|	|	5.25
21.667	0.00	0.04	0.618	O	|	|	|	|	5.25
21.750	0.00	0.04	0.618	O	|	|	|	|	5.25
21.833	0.00	0.03	0.617	O	|	|	|	|	5.25
21.917	0.00	0.03	0.617	O	|	|	|	|	5.25
22.000	0.00	0.03	0.617	O	|	|	|	|	5.24
22.083	0.00	0.02	0.617	O	|	|	|	|	5.24
22.167	0.00	0.02	0.617	O	|	|	|	|	5.24
22.250	0.00	0.02	0.617	O	|	|	|	|	5.24
22.333	0.00	0.02	0.616	O	|	|	|	|	5.24
22.417	0.00	0.02	0.616	O	|	|	|	|	5.24
22.500	0.00	0.02	0.616	O	|	|	|	|	5.24
22.583	0.00	0.01	0.616	O	|	|	|	|	5.24
22.667	0.00	0.01	0.616	O	|	|	|	|	5.24
22.750	0.00	0.01	0.616	O	|	|	|	|	5.24
22.833	0.00	0.01	0.616	O	|	|	|	|	5.24
22.917	0.00	0.01	0.616	O	|	|	|	|	5.24
23.000	0.00	0.01	0.616	O	|	|	|	|	5.23
23.083	0.00	0.01	0.616	O	|	|	|	|	5.23
23.167	0.00	0.01	0.616	O	|	|	|	|	5.23
23.250	0.00	0.01	0.615	O	|	|	|	|	5.23
23.333	0.00	0.01	0.615	O	|	|	|	|	5.23
23.417	0.00	0.01	0.615	O	|	|	|	|	5.23
23.500	0.00	0.01	0.615	O	|	|	|	|	5.23
23.583	0.00	0.00	0.615	O	|	|	|	|	5.23
23.667	0.00	0.00	0.615	O	|	|	|	|	5.23
23.750	0.00	0.00	0.615	O	|	|	|	|	5.23
23.833	0.00	0.00	0.615	O	|	|	|	|	5.23
23.917	0.00	0.00	0.615	O	|	|	|	|	5.23
24.000	0.00	0.00	0.615	O	|	|	|	|	5.23
24.083	0.00	0.00	0.615	O	|	|	|	|	5.23
24.167	0.00	0.00	0.615	O	|	|	|	|	5.23
24.250	0.00	0.00	0.615	O	|	|	|	|	5.23
24.333	0.00	0.00	0.615	O	|	|	|	|	5.23
24.417	0.00	0.00	0.615	O	|	|	|	|	5.23
24.500	0.00	0.00	0.615	O	|	|	|	|	5.23
24.583	0.00	0.00	0.615	O	|	|	|	|	5.23
24.667	0.00	0.00	0.615	O	|	|	|	|	5.23
24.750	0.00	0.00	0.615	O	|	|	|	|	5.23
24.833	0.00	0.00	0.615	O	|	|	|	|	5.23
24.917	0.00	0.00	0.615	O	|	|	|	|	5.23
25.000	0.00	0.00	0.615	O	|	|	|	|	5.23

Remaining water in basin = 0.62 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 300
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5.067 (CFS)
Total volume = 0.386 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.742	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	1.376	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018
Study date: 04/17/24

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
25-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-17-24

Program License Serial Number 6320

******************** HYDROGRAPH INFORMATION **********************

From study/file name: DEVHYDA25.rte
****************************HYDROGRAPH DATA****************************
Number of intervals = 294
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 23.195 (CFS)
Total volume = 2.987 (Ac.Ft)
Status of hydrographs being held in storage
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
Peak (CFS) 0.000 0.000 0.000 0.000 0.000
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000
****

++
Process from Point/Station 0.000 to Point/Station 0.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****
_____
All flow in excess of 0.74(CFS) is diverted
into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1) is 1.52(Ac.Ft)
++
P R I N T O F 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	0.2	0.4	0.6	0.7
0+ 5	0.0002	0.04	VQ				
0+10	0.0019	0.23	V	Q			
0+15	0.0055	0.53	V			Q	
0+20	0.0101	0.67	V				Q
0+25	0.0150	0.72	V				Q
0+30	0.0200	0.73	V				Q
0+35	0.0251	0.74	V				Q
0+40	0.0302	0.74	V				Q
0+45	0.0353	0.74	V				Q
0+50	0.0404	0.74	V				Q
0+55	0.0455	0.74	V				Q
1+ 0	0.0506	0.74	V				Q
1+ 5	0.0558	0.74	V				Q
1+10	0.0609	0.74	V				Q
1+15	0.0660	0.74	V				Q
1+20	0.0711	0.74	V				Q
1+25	0.0762	0.74	V				Q

1+30	0.0813	0.74	V				Q
1+35	0.0864	0.74	V				Q
1+40	0.0915	0.74	V				Q
1+45	0.0966	0.74	V				Q
1+50	0.1017	0.74	V				Q
1+55	0.1069	0.74	V				Q
2+ 0	0.1120	0.74	V				Q
2+ 5	0.1171	0.74	V				Q
2+10	0.1222	0.74	V				Q
2+15	0.1273	0.74	V				Q
2+20	0.1324	0.74	V				Q
2+25	0.1375	0.74	V				Q
2+30	0.1426	0.74	V				Q
2+35	0.1477	0.74	V				Q
2+40	0.1528	0.74	V				Q
2+45	0.1580	0.74	V				Q
2+50	0.1631	0.74	V				Q
2+55	0.1682	0.74	V				Q
3+ 0	0.1733	0.74	V				Q
3+ 5	0.1784	0.74	V				Q
3+10	0.1835	0.74	V				Q
3+15	0.1886	0.74	V				Q
3+20	0.1937	0.74	V				Q
3+25	0.1988	0.74	V				Q
3+30	0.2040	0.74	V				Q
3+35	0.2091	0.74	V				Q
3+40	0.2142	0.74	V				Q
3+45	0.2193	0.74	V				Q
3+50	0.2244	0.74	V				Q
3+55	0.2295	0.74	V				Q
4+ 0	0.2346	0.74	V				Q
4+ 5	0.2397	0.74	V				Q
4+10	0.2448	0.74	V				Q
4+15	0.2499	0.74	V				Q
4+20	0.2551	0.74	V				Q
4+25	0.2602	0.74	V				Q
4+30	0.2653	0.74	V				Q
4+35	0.2704	0.74	V				Q
4+40	0.2755	0.74	V				Q
4+45	0.2806	0.74	V				Q
4+50	0.2857	0.74	V				Q
4+55	0.2908	0.74	V				Q
5+ 0	0.2959	0.74	V				Q
5+ 5	0.3010	0.74	V				Q
5+10	0.3062	0.74	V				Q
5+15	0.3113	0.74	V				Q
5+20	0.3164	0.74	V				Q
5+25	0.3215	0.74	V				Q
5+30	0.3266	0.74	V				Q
5+35	0.3317	0.74	V				Q
5+40	0.3368	0.74	V				Q
5+45	0.3419	0.74	V				Q
5+50	0.3470	0.74	V				Q
5+55	0.3521	0.74	V				Q
6+ 0	0.3573	0.74	V				Q
6+ 5	0.3624	0.74	V				Q
6+10	0.3675	0.74	V				Q
6+15	0.3726	0.74	V				Q
6+20	0.3777	0.74	V				Q
6+25	0.3828	0.74	V				Q
6+30	0.3879	0.74	V				Q
6+35	0.3930	0.74	V				Q
6+40	0.3981	0.74	V				Q
6+45	0.4032	0.74	V				Q
6+50	0.4084	0.74	V				Q
6+55	0.4135	0.74	V				Q
7+ 0	0.4186	0.74	V				Q
7+ 5	0.4237	0.74	V				Q
7+10	0.4288	0.74	V				Q

7+15	0.4339	0.74	|	V	|	|	Q
7+20	0.4390	0.74	|	V	|	|	Q
7+25	0.4441	0.74	|	V	|	|	Q
7+30	0.4492	0.74	|	V	|	|	Q
7+35	0.4543	0.74	|	V	|	|	Q
7+40	0.4595	0.74	|	V	|	|	Q
7+45	0.4646	0.74	|	V	|	|	Q
7+50	0.4697	0.74	|	V	|	|	Q
7+55	0.4748	0.74	|	V	|	|	Q
8+ 0	0.4799	0.74	|	V	|	|	Q
8+ 5	0.4850	0.74	|	V	|	|	Q
8+10	0.4901	0.74	|	V	|	|	Q
8+15	0.4952	0.74	|	V	|	|	Q
8+20	0.5003	0.74	|	V	|	|	Q
8+25	0.5055	0.74	|	V	|	|	Q
8+30	0.5106	0.74	|	V	|	|	Q
8+35	0.5157	0.74	|	V	|	|	Q
8+40	0.5208	0.74	|	V	|	|	Q
8+45	0.5259	0.74	|	V	|	|	Q
8+50	0.5310	0.74	|	V	|	|	Q
8+55	0.5361	0.74	|	V	|	|	Q
9+ 0	0.5412	0.74	|	V	|	|	Q
9+ 5	0.5463	0.74	|	V	|	|	Q
9+10	0.5514	0.74	|	V	|	|	Q
9+15	0.5566	0.74	|	V	|	|	Q
9+20	0.5617	0.74	|	V	|	|	Q
9+25	0.5668	0.74	|	V	|	|	Q
9+30	0.5719	0.74	|	V	|	|	Q
9+35	0.5770	0.74	|	V	|	|	Q
9+40	0.5821	0.74	|	V	|	|	Q
9+45	0.5872	0.74	|	V	|	|	Q
9+50	0.5923	0.74	|	V	|	|	Q
9+55	0.5974	0.74	|	V	|	|	Q
10+ 0	0.6025	0.74	|	V	|	|	Q
10+ 5	0.6077	0.74	|	V	|	|	Q
10+10	0.6128	0.74	|	V	|	|	Q
10+15	0.6179	0.74	|	V	|	|	Q
10+20	0.6230	0.74	|	V	|	|	Q
10+25	0.6281	0.74	|	V	|	|	Q
10+30	0.6332	0.74	|	V	|	|	Q
10+35	0.6383	0.74	|	V	|	|	Q
10+40	0.6434	0.74	|	V	|	|	Q
10+45	0.6485	0.74	|	V	|	|	Q
10+50	0.6536	0.74	|	V	|	|	Q
10+55	0.6588	0.74	|	V	|	|	Q
11+ 0	0.6639	0.74	|	V	|	|	Q
11+ 5	0.6690	0.74	|	V	|	|	Q
11+10	0.6741	0.74	|	V	|	|	Q
11+15	0.6792	0.74	|	V	|	|	Q
11+20	0.6843	0.74	|	V	|	|	Q
11+25	0.6894	0.74	|	V	|	|	Q
11+30	0.6945	0.74	|	V	|	|	Q
11+35	0.6996	0.74	|	V	|	|	Q
11+40	0.7047	0.74	|	V	|	|	Q
11+45	0.7099	0.74	|	V	|	|	Q
11+50	0.7150	0.74	|	V	|	|	Q
11+55	0.7201	0.74	|	V	|	|	Q
12+ 0	0.7252	0.74	|	V	|	|	Q
12+ 5	0.7303	0.74	|	V	|	|	Q
12+10	0.7354	0.74	|	V	|	|	Q
12+15	0.7405	0.74	|	V	|	|	Q
12+20	0.7456	0.74	|	V	|	|	Q
12+25	0.7507	0.74	|	V	|	|	Q
12+30	0.7559	0.74	|	V	|	|	Q
12+35	0.7610	0.74	|	V	|	|	Q
12+40	0.7661	0.74	|	V	|	|	Q
12+45	0.7712	0.74	|	V	|	|	Q
12+50	0.7763	0.74	|	V	|	|	Q
12+55	0.7814	0.74	|	V	|	|	Q

13+ 0	0.7865	0.74	|	|	|V	Q
13+ 5	0.7916	0.74	|	|	|V	Q
13+10	0.7967	0.74	|	|	|V	Q
13+15	0.8018	0.74	|	|	|V	Q
13+20	0.8070	0.74	|	|	|V	Q
13+25	0.8121	0.74	|	|	| V	Q
13+30	0.8172	0.74	|	|	| V	Q
13+35	0.8223	0.74	|	|	| V	Q
13+40	0.8274	0.74	|	|	| V	Q
13+45	0.8325	0.74	|	|	| V	Q
13+50	0.8376	0.74	|	|	| V	Q
13+55	0.8427	0.74	|	|	| V	Q
14+ 0	0.8478	0.74	|	|	| V	Q
14+ 5	0.8529	0.74	|	|	| V	Q
14+10	0.8581	0.74	|	|	| V	Q
14+15	0.8632	0.74	|	|	| V	Q
14+20	0.8683	0.74	|	|	| V	Q
14+25	0.8734	0.74	|	|	| V	Q
14+30	0.8785	0.74	|	|	| V	Q
14+35	0.8836	0.74	|	|	| V	Q
14+40	0.8887	0.74	|	|	| V	Q
14+45	0.8938	0.74	|	|	| V	Q
14+50	0.8989	0.74	|	|	| V	Q
14+55	0.9040	0.74	|	|	| V	Q
15+ 0	0.9092	0.74	|	|	| V	Q
15+ 5	0.9143	0.74	|	|	| V	Q
15+10	0.9194	0.74	|	|	| V	Q
15+15	0.9245	0.74	|	|	| V	Q
15+20	0.9296	0.74	|	|	| V	Q
15+25	0.9347	0.74	|	|	| V	Q
15+30	0.9398	0.74	|	|	| V	Q
15+35	0.9449	0.74	|	|	| V	Q
15+40	0.9500	0.74	|	|	| V	Q
15+45	0.9551	0.74	|	|	| V	Q
15+50	0.9603	0.74	|	|	| V	Q
15+55	0.9654	0.74	|	|	| V	Q
16+ 0	0.9705	0.74	|	|	| V	Q
16+ 5	0.9756	0.74	|	|	| V	Q
16+10	0.9807	0.74	|	|	| V	Q
16+15	0.9858	0.74	|	|	| V	Q
16+20	0.9909	0.74	|	|	| V	Q
16+25	0.9960	0.74	|	|	| V	Q
16+30	1.0011	0.74	|	|	| V	Q
16+35	1.0063	0.74	|	|	| V	Q
16+40	1.0114	0.74	|	|	| V	Q
16+45	1.0165	0.74	|	|	| V	Q
16+50	1.0216	0.74	|	|	| V	Q
16+55	1.0267	0.74	|	|	| V	Q
17+ 0	1.0318	0.74	|	|	| V	Q
17+ 5	1.0369	0.74	|	|	| V	Q
17+10	1.0420	0.74	|	|	| V	Q
17+15	1.0471	0.74	|	|	| V	Q
17+20	1.0522	0.74	|	|	| V	Q
17+25	1.0574	0.74	|	|	| V	Q
17+30	1.0625	0.74	|	|	| V	Q
17+35	1.0676	0.74	|	|	| V	Q
17+40	1.0727	0.74	|	|	| V	Q
17+45	1.0778	0.74	|	|	| V	Q
17+50	1.0829	0.74	|	|	| V	Q
17+55	1.0880	0.74	|	|	| V	Q
18+ 0	1.0931	0.74	|	|	| V	Q
18+ 5	1.0982	0.74	|	|	| V	Q
18+10	1.1033	0.74	|	|	| V	Q
18+15	1.1085	0.74	|	|	| V	Q
18+20	1.1136	0.74	|	|	| V	Q
18+25	1.1187	0.74	|	|	| V	Q
18+30	1.1238	0.74	|	|	| V	Q
18+35	1.1289	0.74	|	|	| V	Q
18+40	1.1340	0.74	|	|	| V	Q

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18+45       1.1391      0.74  |         |         |         V         Q
18+50       1.1442      0.74  |         |         |          V        Q
18+55       1.1493      0.74  |         |         |         |V        Q
19+ 0       1.1544      0.74  |         |         |         |V        Q
19+ 5       1.1596      0.74  |         |         |         |V        Q
19+10       1.1647      0.74  |         |         |         |V        Q
19+15       1.1698      0.74  |         |         |         |V        Q
19+20       1.1749      0.74  |         |         |         |V        Q
19+25       1.1800      0.74  |         |         |         | V       Q
19+30       1.1851      0.74  |         |         |         | V       Q
19+35       1.1902      0.74  |         |         |         | V       Q
19+40       1.1953      0.74  |         |         |         | V       Q
19+45       1.2004      0.74  |         |         |         | V       Q
19+50       1.2055      0.74  |         |         |         | V       Q
19+55       1.2107      0.74  |         |         |         | V       Q
20+ 0       1.2158      0.74  |         |         |         |  V      Q
20+ 5       1.2209      0.74  |         |         |         |  V      Q
20+10       1.2260      0.74  |         |         |         |  V      Q
20+15       1.2311      0.74  |         |         |         |  V      Q
20+20       1.2362      0.74  |         |         |         |  V      Q
20+25       1.2413      0.74  |         |         |         |  V      Q
20+30       1.2464      0.74  |         |         |         |  V      Q
20+35       1.2515      0.74  |         |         |         |   V     Q
20+40       1.2567      0.74  |         |         |         |   V     Q
20+45       1.2618      0.74  |         |         |         |   V     Q
20+50       1.2669      0.74  |         |         |         |   V     Q
20+55       1.2720      0.74  |         |         |         |   V     Q
21+ 0       1.2771      0.74  |         |         |         |   V     Q
21+ 5       1.2822      0.74  |         |         |         |   V     Q
21+10       1.2873      0.74  |         |         |         |   V     Q
21+15       1.2924      0.74  |         |         |         |    V    Q
21+20       1.2975      0.74  |         |         |         |    V    Q
21+25       1.3026      0.74  |         |         |         |    V    Q
21+30       1.3078      0.74  |         |         |         |    V    Q
21+35       1.3129      0.74  |         |         |         |    V    Q
21+40       1.3180      0.74  |         |         |         |    V    Q
21+45       1.3231      0.74  |         |         |         |    V    Q
21+50       1.3282      0.74  |         |         |         |     V   Q
21+55       1.3333      0.74  |         |         |         |     V   Q
22+ 0       1.3384      0.74  |         |         |         |     V   Q
22+ 5       1.3435      0.74  |         |         |         |     V   Q
22+10       1.3486      0.74  |         |         |         |     V   Q
22+15       1.3537      0.74  |         |         |         |     V   Q
22+20       1.3589      0.74  |         |         |         |     V   Q
22+25       1.3640      0.74  |         |         |         |      V  Q
22+30       1.3691      0.74  |         |         |         |      V  Q
22+35       1.3742      0.74  |         |         |         |      V  Q
22+40       1.3793      0.74  |         |         |         |      V  Q
22+45       1.3844      0.74  |         |         |         |      V  Q
22+50       1.3895      0.74  |         |         |         |      V  Q
22+55       1.3946      0.74  |         |         |         |      V  Q
23+ 0       1.3997      0.74  |         |         |         |       V Q
23+ 5       1.4048      0.74  |         |         |         |       V Q
23+10       1.4100      0.74  |         |         |         |       V Q
23+15       1.4151      0.74  |         |         |         |       V Q
23+20       1.4202      0.74  |         |         |         |       V Q
23+25       1.4253      0.74  |         |         |         |       V Q
23+30       1.4304      0.74  |         |         |         |       V Q
23+35       1.4355      0.74  |         |         |         |        VQ
23+40       1.4406      0.74  |         |         |         |        VQ
23+45       1.4457      0.74  |         |         |         |        VQ
23+50       1.4508      0.74  |         |         |         |        VQ
23+55       1.4559      0.74  |         |         |         |        VQ
24+ 0       1.4610      0.74  |         |         |         |        Q|
24+ 5       1.4659      0.70  |         |         |         |      Q V|
24+10       1.4693      0.50  |         |         |     Q   |        V|
24+15       1.4707      0.21  |         |Q        |         |        V|
24+20       1.4711      0.06  |  Q      |         |         |        V|
24+25       1.4713      0.02  Q         |         |         |        V|
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  24+30       1.4713      0.01  Q         |         |         |         V
-------------------------------------------------------------------------
       ***************************HYDROGRAPH DATA**************************
                    Number of intervals =   294
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        0.742 (CFS)
                    Total volume =       1.471 (Ac.Ft)
             Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
             Peak (CFS)     22.453     0.000     0.000     0.000     0.000
             Vol (Ac.Ft)      1.516     0.000     0.000     0.000     0.000
       *************************************************************************

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


       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        0.000 to Point/Station        0.000
       **** STORE OR DELETE CURRENT HYDROGRAPH ****
       _________________________________________________________________________
       Current stream hydrograph of   5.0 minute
       intervals has been stored as stream number 2 with
       a starting time of   0.00 hours and ending time of 333.33 hours
       With a total volume of       1.47(Ac.Ft)
       ***************************HYDROGRAPH DATA**************************
                    Number of intervals =     0
                    Time interval =    0.0 (Min.)
                    Maximum/Peak flow rate =        0.000 (CFS)
                    Total volume =       0.000 (Ac.Ft)
             Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
             Peak (CFS)     22.453     0.742     0.000     0.000     0.000
             Vol (Ac.Ft)      1.516     1.471     0.000     0.000     0.000
       *************************************************************************

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


       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        1.000 to Point/Station        1.000
       **** ADD/COMBINE/RECOVER HYDROGRAPHS ****
       _________________________________________________________________________
       From stored stream number 1 the total
       volume of       1.52 (Ac.Ft) is being added to the
       current hydrograph at its original rate from user
       with a delay time to start of addition of    0.00 hours.
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                       P R I N T  O F  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) Add q(CFS)  Tot. Q   0        5.6      11.2      16.8      22.5
  ------------------------------------------------------------------------
    0+ 5       0.0000      0.00  Q         |         |         |         |
    0+10       0.0000      0.00  Q         |         |         |         |
    0+15       0.0000      0.00  Q         |         |         |         |
    0+20       0.0000      0.00  Q         |         |         |         |
    0+25       0.0000      0.00  Q         |         |         |         |
    0+30       0.0000      0.00  Q         |         |         |         |
    0+35       0.0000      0.00  Q         |         |         |         |
    0+40       0.0000      0.00  Q         |         |         |         |
    0+45       0.0000      0.00  Q         |         |         |         |
    0+50       0.0011      0.00  Q         |         |         |         |
    0+55       0.0031      0.00  Q         |         |         |         |
    1+ 0       0.0051      0.01  Q         |         |         |         |
    1+ 5       0.0071      0.01  Q         |         |         |         |
    1+10       0.0091      0.01  Q         |         |         |         |
```

1+15	0.0112	0.01	Q				
1+20	0.0133	0.01	Q				
1+25	0.0154	0.02	Q				
1+30	0.0175	0.02	Q				
1+35	0.0196	0.02	Q				
1+40	0.0217	0.02	Q				
1+45	0.0239	0.02	Q				
1+50	0.0261	0.03	Q				
1+55	0.0283	0.03	Q				
2+ 0	0.0305	0.03	Q				
2+ 5	0.0328	0.03	Q				
2+10	0.0350	0.04	Q				
2+15	0.0373	0.04	Q				
2+20	0.0396	0.04	Q				
2+25	0.0419	0.04	Q				
2+30	0.0443	0.04	Q				
2+35	0.0466	0.05	Q				
2+40	0.0490	0.05	Q				
2+45	0.0514	0.05	Q				
2+50	0.0538	0.05	Q				
2+55	0.0563	0.06	Q				
3+ 0	0.0588	0.06	Q				
3+ 5	0.0613	0.06	Q				
3+10	0.0638	0.06	Q				
3+15	0.0664	0.07	Q				
3+20	0.0689	0.07	Q				
3+25	0.0715	0.07	Q				
3+30	0.0741	0.07	Q				
3+35	0.0768	0.08	Q				
3+40	0.0795	0.08	Q				
3+45	0.0822	0.08	Q				
3+50	0.0849	0.08	Q				
3+55	0.0877	0.09	Q				
4+ 0	0.0904	0.09	Q				
4+ 5	0.0933	0.09	Q				
4+10	0.0961	0.10	Q				
4+15	0.0990	0.10	Q				
4+20	0.1018	0.10	Q				
4+25	0.1048	0.10	Q				
4+30	0.1077	0.11	Q				
4+35	0.1108	0.11	Q				
4+40	0.1137	0.11	Q				
4+45	0.1168	0.12	Q				
4+50	0.1199	0.12	Q				
4+55	0.1231	0.12	Q				
5+ 0	0.1262	0.13	Q				
5+ 5	0.1294	0.13	Q				
5+10	0.1326	0.13	Q				
5+15	0.1359	0.14	Q				
5+20	0.1392	0.14	Q				
5+25	0.1426	0.14	Q				
5+30	0.1459	0.15	Q				
5+35	0.1494	0.15	Q				
5+40	0.1528	0.15	Q				
5+45	0.1563	0.16	Q				
5+50	0.1598	0.16	Q				
5+55	0.1635	0.16	Q				
6+ 0	0.1670	0.17	Q				
6+ 5	0.1708	0.17	Q				
6+10	0.1744	0.17	Q				
6+15	0.1782	0.18	Q				
6+20	0.1820	0.18	Q				
6+25	0.1859	0.19	Q				
6+30	0.1898	0.19	Q				
6+35	0.1938	0.19	Q				
6+40	0.1977	0.20	Q				
6+45	0.2019	0.20	Q				
6+50	0.2059	0.21	Q				
6+55	0.2102	0.21	Q				

7+ 0	0.2143	0.21	Q	|	|	|	|
7+ 5	0.2187	0.22	Q	|	|	|	|
7+10	0.2230	0.22	Q	|	|	|	|
7+15	0.2274	0.23	Q	|	|	|	|
7+20	0.2318	0.23	Q	|	|	|	|
7+25	0.2364	0.24	Q	|	|	|	|
7+30	0.2410	0.24	Q	|	|	|	|
7+35	0.2457	0.25	Q	|	|	|	|
7+40	0.2503	0.25	Q	|	|	|	|
7+45	0.2552	0.26	Q	|	|	|	|
7+50	0.2600	0.26	Q	|	|	|	|
7+55	0.2650	0.27	Q	|	|	|	|
8+ 0	0.2700	0.27	Q	|	|	|	|
8+ 5	0.2751	0.28	Q	|	|	|	|
8+10	0.2802	0.28	Q	|	|	|	|
8+15	0.2855	0.29	Q	|	|	|	|
8+20	0.2908	0.29	Q	|	|	|	|
8+25	0.2963	0.30	Q	|	|	|	|
8+30	0.3017	0.30	Q	|	|	|	|
8+35	0.3074	0.31	Q	|	|	|	|
8+40	0.3130	0.31	Q	|	|	|	|
8+45	0.3188	0.32	Q	|	|	|	|
8+50	0.3246	0.32	Q	|	|	|	|
8+55	0.3307	0.33	Q	|	|	|	|
9+ 0	0.3367	0.34	Q	|	|	|	|
9+ 5	0.3429	0.34	Q	|	|	|	|
9+10	0.3492	0.35	Q	|	|	|	|
9+15	0.3556	0.36	Q	|	|	|	|
9+20	0.3621	0.36	Q	|	|	|	|
9+25	0.3688	0.37	Q	|	|	|	|
9+30	0.3755	0.38	Q	|	|	|	|
9+35	0.3824	0.38	Q	|	|	|	|
9+40	0.3894	0.39	Q	|	|	|	|
9+45	0.3966	0.40	Q	|	|	|	|
9+50	0.4038	0.40	Q	|	|	|	|
9+55	0.4113	0.41	Q	|	|	|	|
10+ 0	0.4188	0.42	Q	|	|	|	|
10+ 5	0.4266	0.43	Q	|	|	|	|
10+10	0.4344	0.43	Q	|	|	|	|
10+15	0.4426	0.44	Q	|	|	|	|
10+20	0.4507	0.45	Q	|	|	|	|
10+25	0.4592	0.46	Q	|	|	|	|
10+30	0.4677	0.47	Q	|	|	|	|
10+35	0.4766	0.48	Q	|	|	|	|
10+40	0.4854	0.49	Q	|	|	|	|
10+45	0.4947	0.49	Q	|	|	|	|
10+50	0.5040	0.50	Q	|	|	|	|
10+55	0.5137	0.51	Q	|	|	|	|
11+ 0	0.5234	0.52	Q	|	|	|	|
11+ 5	0.5335	0.53	Q	|	|	|	|
11+10	0.5437	0.54	Q	|	|	|	|
11+15	0.5544	0.55	Q	|	|	|	|
11+20	0.5651	0.57	|Q	|	|	|	|
11+25	0.5763	0.58	|Q	|	|	|	|
11+30	0.5876	0.59	|Q	|	|	|	|
11+35	0.5994	0.60	|Q	|	|	|	|
11+40	0.6113	0.61	|Q	|	|	|	|
11+45	0.6238	0.62	|Q	|	|	|	|
11+50	0.6364	0.64	|Q	|	|	|	|
11+55	0.6496	0.65	|Q	|	|	|	|
12+ 0	0.6629	0.66	|Q	|	|	|	|
12+ 5	0.6771	0.68	|Q	|	|	|	|
12+10	0.6926	0.69	|Q	|	|	|	|
12+15	0.7095	0.71	|Q	|	|	|	|
12+20	0.7255	0.73	|Q	|	|	|	|
12+25	0.7417	0.74	|Q	|	|	|	|
12+30	0.7578	0.76	|Q	|	|	|	|
12+35	0.7747	0.77	|Q	|	|	|	|
12+40	0.7919	0.79	|Q	|	|	|	|

12+45	0.8100	0.81	Q				
12+50	0.8284	0.83	Q				
12+55	0.8478	0.85	Q				
13+ 0	0.8676	0.87	Q				
13+ 5	0.8886	0.89	Q				
13+10	0.9100	0.91	Q				
13+15	0.9328	0.93	Q				
13+20	0.9560	0.96	Q				
13+25	0.9808	0.98	Q				
13+30	1.0062	1.01	Q				
13+35	1.0333	1.03	Q				
13+40	1.0611	1.06	Q				
13+45	1.0909	1.09	Q				
13+50	1.1216	1.12	Q				
13+55	1.1546	1.15	Q				
14+ 0	1.1887	1.19	Q				
14+ 5	1.2256	1.23	Q				
14+10	1.2642	1.26	Q				
14+15	1.3062	1.31	Q				
14+20	1.3497	1.35	Q				
14+25	1.3969	1.40	Q				
14+30	1.4464	1.45	Q				
14+35	1.5006	1.50	Q				
14+40	1.5580	1.56	Q				
14+45	1.6214	1.62	Q				
14+50	1.6890	1.69	Q				
14+55	1.7643	1.76	Q				
15+ 0	1.8457	1.85	Q				
15+ 5	1.9374	1.94	Q				
15+10	2.0379	2.04	Q				
15+15	2.1530	2.15	Q				
15+20	2.2819	2.28	Q				
15+25	2.3953	2.40	Q				
15+30	2.3643	2.36	Q				
15+35	2.2734	2.27	Q				
15+40	2.3765	2.38	Q				
15+45	2.6522	2.65	Q				
15+50	3.0728	3.07	Q				
15+55	3.7449	3.74	Q				
16+ 0	5.1588	5.16	Q				
16+ 5	9.3672	9.37		Q			
16+10	18.9799	18.98				Q	
16+15	22.4535	22.45					Q
16+20	12.7435	12.74			Q		
16+25	6.0596	6.06	Q				
16+30	3.5067	3.51	Q				
16+35	3.0288	3.03	Q				
16+40	2.3661	2.37	Q				
16+45	2.1192	2.12	Q				
16+50	1.9119	1.91	Q				
16+55	1.7471	1.75	Q				
17+ 0	1.6052	1.61	Q				
17+ 5	1.4857	1.49	Q				
17+10	1.3829	1.38	Q				
17+15	1.2931	1.29	Q				
17+20	1.2142	1.21	Q				
17+25	1.1441	1.14	Q				
17+30	1.0811	1.08	Q				
17+35	1.0242	1.02	Q				
17+40	0.9724	0.97	Q				
17+45	0.9250	0.93	Q				
17+50	0.8814	0.88	Q				
17+55	0.8410	0.84	Q				
18+ 0	0.8036	0.80	Q				
18+ 5	0.7685	0.77	Q				
18+10	0.7345	0.73	Q				
18+15	0.7019	0.70	Q				
18+20	0.6722	0.67	Q				
18+25	0.6449	0.64	Q				

18+30	0.6193	0.62	|Q	|	|	|	|
18+35	0.5951	0.60	|Q	|	|	|	|
18+40	0.5722	0.57	|Q	|	|	|	|
18+45	0.5504	0.55	Q	|	|	|	|
18+50	0.5297	0.53	Q	|	|	|	|
18+55	0.5100	0.51	Q	|	|	|	|
19+ 0	0.4912	0.49	Q	|	|	|	|
19+ 5	0.4732	0.47	Q	|	|	|	|
19+10	0.4560	0.46	Q	|	|	|	|
19+15	0.4395	0.44	Q	|	|	|	|
19+20	0.4237	0.42	Q	|	|	|	|
19+25	0.4085	0.41	Q	|	|	|	|
19+30	0.3938	0.39	Q	|	|	|	|
19+35	0.3798	0.38	Q	|	|	|	|
19+40	0.3662	0.37	Q	|	|	|	|
19+45	0.3531	0.35	Q	|	|	|	|
19+50	0.3405	0.34	Q	|	|	|	|
19+55	0.3283	0.33	Q	|	|	|	|
20+ 0	0.3166	0.32	Q	|	|	|	|
20+ 5	0.3052	0.31	Q	|	|	|	|
20+10	0.2941	0.29	Q	|	|	|	|
20+15	0.2835	0.28	Q	|	|	|	|
20+20	0.2731	0.27	Q	|	|	|	|
20+25	0.2631	0.26	Q	|	|	|	|
20+30	0.2533	0.25	Q	|	|	|	|
20+35	0.2438	0.24	Q	|	|	|	|
20+40	0.2346	0.23	Q	|	|	|	|
20+45	0.2257	0.23	Q	|	|	|	|
20+50	0.2170	0.22	Q	|	|	|	|
20+55	0.2085	0.21	Q	|	|	|	|
21+ 0	0.2002	0.20	Q	|	|	|	|
21+ 5	0.1922	0.19	Q	|	|	|	|
21+10	0.1844	0.18	Q	|	|	|	|
21+15	0.1767	0.18	Q	|	|	|	|
21+20	0.1693	0.17	Q	|	|	|	|
21+25	0.1620	0.16	Q	|	|	|	|
21+30	0.1549	0.15	Q	|	|	|	|
21+35	0.1480	0.15	Q	|	|	|	|
21+40	0.1412	0.14	Q	|	|	|	|
21+45	0.1346	0.13	Q	|	|	|	|
21+50	0.1281	0.13	Q	|	|	|	|
21+55	0.1218	0.12	Q	|	|	|	|
22+ 0	0.1156	0.12	Q	|	|	|	|
22+ 5	0.1096	0.11	Q	|	|	|	|
22+10	0.1036	0.10	Q	|	|	|	|
22+15	0.0978	0.10	Q	|	|	|	|
22+20	0.0921	0.09	Q	|	|	|	|
22+25	0.0866	0.09	Q	|	|	|	|
22+30	0.0811	0.08	Q	|	|	|	|
22+35	0.0757	0.08	Q	|	|	|	|
22+40	0.0705	0.07	Q	|	|	|	|
22+45	0.0653	0.07	Q	|	|	|	|
22+50	0.0603	0.06	Q	|	|	|	|
22+55	0.0553	0.06	Q	|	|	|	|
23+ 0	0.0505	0.05	Q	|	|	|	|
23+ 5	0.0457	0.05	Q	|	|	|	|
23+10	0.0410	0.04	Q	|	|	|	|
23+15	0.0364	0.04	Q	|	|	|	|
23+20	0.0319	0.03	Q	|	|	|	|
23+25	0.0274	0.03	Q	|	|	|	|
23+30	0.0230	0.02	Q	|	|	|	|
23+35	0.0188	0.02	Q	|	|	|	|
23+40	0.0145	0.01	Q	|	|	|	|
23+45	0.0104	0.01	Q	|	|	|	|
23+50	0.0063	0.01	Q	|	|	|	|
23+55	0.0023	0.00	Q	|	|	|	|
24+ 0	0.0000	0.00	Q	|	|	|	|
24+ 5	0.0000	0.00	Q	|	|	|	|
24+10	0.0000	0.00	Q	|	|	|	|

```
   24+15       0.0000      0.00  Q         |         |         |         |
   24+20       0.0000      0.00  Q         |         |         |         |
   24+25       0.0000      0.00  Q         |         |         |         |
   24+30       0.0000      0.00  Q         |         |         |         |
   24+35       0.0000      0.00  Q         |         |         |         |
-------------------------------------------------------------------------
        ****************************HYDROGRAPH DATA****************************
                      Number of intervals =   295
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =       22.453 (CFS)
                      Total volume =       1.516 (Ac.Ft)
               Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
               Peak (CFS)      0.000     0.742     0.000     0.000     0.000
               Vol (Ac.Ft)      0.000     1.471     0.000     0.000     0.000
        *************************************************************************

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


        +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
        Process from Point/Station        0.000 to Point/Station        1.000
        **** RETARDING BASIN ROUTING ****
        _____________________________________________________________________

        Program computation of outflow v. depth




        CALCULATED OUTFLOW DATA AT DEPTH =    0.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.23(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
        Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
        Manning's N = 0.013   No. of pipes = 1
        Given pipe size =     15.00(In.)
        Calculated individual pipe flow  =     0.482(CFS)
        Normal flow depth in pipe =    3.29(In.)
        Flow top width inside pipe =   12.42(In.)
        Critical Depth =    0.27(Ft.)
        Calculated flow rate through pipe(s) =      0.482(CFS)

        Total outflow at this depth =      0.48(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
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```
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.770(Ft.)
Pipe friction loss =      1.075(Ft.)
Minor friction loss =      0.694(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.698(CFS)

Total outflow at this depth =      6.70(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      2.770(Ft.)
Pipe friction loss =      1.683(Ft.)
Minor friction loss =      1.086(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      8.379(CFS)

Total outflow at this depth =      8.38(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.770(Ft.)
Pipe friction loss =      2.290(Ft.)
Minor friction loss =      1.478(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      9.775(CFS)

Total outflow at this depth =      9.78(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =   10.00(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.270(Ft.)
Pipe friction loss =      3.201(Ft.)
Minor friction loss =      2.066(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =     11.558(CFS)

Total outflow at this depth =     11.56(CFS)

----------------------------------------------------------------------
Total number of inflow hydrograph intervals = 295
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
----------------------------------------------------------------------
----------------------------------------------------------------------
Initial basin depth =   0.00 (Ft.)
Initial basin storage =      0.00 (Ac.Ft)
Initial basin outflow =   0.00 (CFS)
----------------------------------------------------------------------
----------------------------------------------------------------------
Depth vs. Storage and Depth vs. Discharge data:
 Basin Depth  Storage    Outflow   (S-O*dt/2)   (S+O*dt/2)
     (Ft.)    (Ac.Ft)    (CFS)     (Ac.Ft)    (Ac.Ft)
----------------------------------------------------------------------
```

0.000	0.000	0.000	0.000	0.000
0.500	0.033	0.000	0.033	0.033
1.500	0.130	0.000	0.130	0.130
2.500	0.250	0.000	0.250	0.250
3.500	0.381	0.000	0.381	0.381
4.500	0.516	0.000	0.516	0.516
5.230	0.615	0.000	0.615	0.615
5.500	0.651	0.482	0.649	0.653
6.500	0.782	6.698	0.759	0.805
7.500	0.902	8.379	0.873	0.931
8.500	1.000	9.775	0.966	1.034
10.000	1.098	11.558	1.058	1.138

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	5.6	11.23	16.84	22.45	Depth (Ft.)
0.083	0.00	0.00	0.000	O	|	|	|	|	0.00
0.167	0.00	0.00	0.000	O	|	|	|	|	0.00
0.250	0.00	0.00	0.000	O	|	|	|	|	0.00
0.333	0.00	0.00	0.000	O	|	|	|	|	0.00
0.417	0.00	0.00	0.000	O	|	|	|	|	0.00
0.500	0.00	0.00	0.000	O	|	|	|	|	0.00
0.583	0.00	0.00	0.000	O	|	|	|	|	0.00
0.667	0.00	0.00	0.000	O	|	|	|	|	0.00
0.750	0.00	0.00	0.000	O	|	|	|	|	0.00
0.833	0.00	0.00	0.000	O	|	|	|	|	0.00
0.917	0.00	0.00	0.000	O	|	|	|	|	0.00
1.000	0.01	0.00	0.000	O	|	|	|	|	0.00
1.083	0.01	0.00	0.000	O	|	|	|	|	0.00
1.167	0.01	0.00	0.000	O	|	|	|	|	0.00
1.250	0.01	0.00	0.000	O	|	|	|	|	0.00
1.333	0.01	0.00	0.000	O	|	|	|	|	0.00
1.417	0.02	0.00	0.000	O	|	|	|	|	0.01
1.500	0.02	0.00	0.001	O	|	|	|	|	0.01
1.583	0.02	0.00	0.001	O	|	|	|	|	0.01
1.667	0.02	0.00	0.001	O	|	|	|	|	0.01
1.750	0.02	0.00	0.001	O	|	|	|	|	0.01
1.833	0.03	0.00	0.001	O	|	|	|	|	0.02
1.917	0.03	0.00	0.001	O	|	|	|	|	0.02
2.000	0.03	0.00	0.001	O	|	|	|	|	0.02
2.083	0.03	0.00	0.002	O	|	|	|	|	0.03
2.167	0.04	0.00	0.002	O	|	|	|	|	0.03
2.250	0.04	0.00	0.002	O	|	|	|	|	0.03
2.333	0.04	0.00	0.002	O	|	|	|	|	0.04
2.417	0.04	0.00	0.003	O	|	|	|	|	0.04
2.500	0.04	0.00	0.003	O	|	|	|	|	0.05
2.583	0.05	0.00	0.003	O	|	|	|	|	0.05
2.667	0.05	0.00	0.004	O	|	|	|	|	0.06
2.750	0.05	0.00	0.004	O	|	|	|	|	0.06
2.833	0.05	0.00	0.004	O	|	|	|	|	0.07
2.917	0.06	0.00	0.005	O	|	|	|	|	0.07
3.000	0.06	0.00	0.005	O	|	|	|	|	0.08
3.083	0.06	0.00	0.006	O	|	|	|	|	0.08
3.167	0.06	0.00	0.006	O	|	|	|	|	0.09
3.250	0.07	0.00	0.006	O	|	|	|	|	0.10
3.333	0.07	0.00	0.007	O	|	|	|	|	0.10
3.417	0.07	0.00	0.007	O	|	|	|	|	0.11
3.500	0.07	0.00	0.008	O	|	|	|	|	0.12
3.583	0.08	0.00	0.008	O	|	|	|	|	0.13
3.667	0.08	0.00	0.009	O	|	|	|	|	0.14
3.750	0.08	0.00	0.010	O	|	|	|	|	0.14
3.833	0.08	0.00	0.010	O	|	|	|	|	0.15
3.917	0.09	0.00	0.011	O	|	|	|	|	0.16
4.000	0.09	0.00	0.011	O	|	|	|	|	0.17
4.083	0.09	0.00	0.012	O	|	|	|	|	0.18

4.167	0.10	0.00	0.013	O	|	|	|	|	0.19
4.250	0.10	0.00	0.013	O	|	|	|	|	0.20
4.333	0.10	0.00	0.014	O	|	|	|	|	0.21
4.417	0.10	0.00	0.015	O	|	|	|	|	0.22
4.500	0.11	0.00	0.015	O	|	|	|	|	0.23
4.583	0.11	0.00	0.016	O	|	|	|	|	0.24
4.667	0.11	0.00	0.017	O	|	|	|	|	0.26
4.750	0.12	0.00	0.018	O	|	|	|	|	0.27
4.833	0.12	0.00	0.019	O	|	|	|	|	0.28
4.917	0.12	0.00	0.019	O	|	|	|	|	0.29
5.000	0.13	0.00	0.020	O	|	|	|	|	0.31
5.083	0.13	0.00	0.021	O	|	|	|	|	0.32
5.167	0.13	0.00	0.022	O	|	|	|	|	0.33
5.250	0.14	0.00	0.023	O	|	|	|	|	0.35
5.333	0.14	0.00	0.024	O	|	|	|	|	0.36
5.417	0.14	0.00	0.025	O	|	|	|	|	0.38
5.500	0.15	0.00	0.026	O	|	|	|	|	0.39
5.583	0.15	0.00	0.027	O	|	|	|	|	0.41
5.667	0.15	0.00	0.028	O	|	|	|	|	0.42
5.750	0.16	0.00	0.029	O	|	|	|	|	0.44
5.833	0.16	0.00	0.030	O	|	|	|	|	0.46
5.917	0.16	0.00	0.031	O	|	|	|	|	0.47
6.000	0.17	0.00	0.032	O	|	|	|	|	0.49
6.083	0.17	0.00	0.033	O	|	|	|	|	0.50
6.167	0.17	0.00	0.035	O	|	|	|	|	0.52
6.250	0.18	0.00	0.036	O	|	|	|	|	0.53
6.333	0.18	0.00	0.037	O	|	|	|	|	0.54
6.417	0.19	0.00	0.038	O	|	|	|	|	0.56
6.500	0.19	0.00	0.040	O	|	|	|	|	0.57
6.583	0.19	0.00	0.041	O	|	|	|	|	0.58
6.667	0.20	0.00	0.042	O	|	|	|	|	0.60
6.750	0.20	0.00	0.044	O	|	|	|	|	0.61
6.833	0.21	0.00	0.045	O	|	|	|	|	0.63
6.917	0.21	0.00	0.047	O	|	|	|	|	0.64
7.000	0.21	0.00	0.048	O	|	|	|	|	0.65
7.083	0.22	0.00	0.050	O	|	|	|	|	0.67
7.167	0.22	0.00	0.051	O	|	|	|	|	0.69
7.250	0.23	0.00	0.053	O	|	|	|	|	0.70
7.333	0.23	0.00	0.054	O	|	|	|	|	0.72
7.417	0.24	0.00	0.056	O	|	|	|	|	0.73
7.500	0.24	0.00	0.057	O	|	|	|	|	0.75
7.583	0.25	0.00	0.059	O	|	|	|	|	0.77
7.667	0.25	0.00	0.061	O	|	|	|	|	0.79
7.750	0.26	0.00	0.063	O	|	|	|	|	0.80
7.833	0.26	0.00	0.064	O	|	|	|	|	0.82
7.917	0.27	0.00	0.066	O	|	|	|	|	0.84
8.000	0.27	0.00	0.068	O	|	|	|	|	0.86
8.083	0.28	0.00	0.070	O	|	|	|	|	0.88
8.167	0.28	0.00	0.072	O	|	|	|	|	0.90
8.250	0.29	0.00	0.074	O	|	|	|	|	0.92
8.333	0.29	0.00	0.076	O	|	|	|	|	0.94
8.417	0.30	0.00	0.078	O	|	|	|	|	0.96
8.500	0.30	0.00	0.080	O	|	|	|	|	0.98
8.583	0.31	0.00	0.082	O	|	|	|	|	1.00
8.667	0.31	0.00	0.084	O	|	|	|	|	1.03
8.750	0.32	0.00	0.086	O	|	|	|	|	1.05
8.833	0.32	0.00	0.088	O	|	|	|	|	1.07
8.917	0.33	0.00	0.091	O	|	|	|	|	1.09
9.000	0.34	0.00	0.093	O	|	|	|	|	1.12
9.083	0.34	0.00	0.095	O	|	|	|	|	1.14
9.167	0.35	0.00	0.098	O	|	|	|	|	1.17
9.250	0.36	0.00	0.100	O	|	|	|	|	1.19
9.333	0.36	0.00	0.103	O	|	|	|	|	1.22
9.417	0.37	0.00	0.105	O	|	|	|	|	1.24
9.500	0.38	0.00	0.108	O	|	|	|	|	1.27
9.583	0.38	0.00	0.110	O	|	|	|	|	1.30
9.667	0.39	0.00	0.113	O	|	|	|	|	1.32
9.750	0.40	0.00	0.116	O	|	|	|	|	1.35
9.833	0.40	0.00	0.118	O	|	|	|	|	1.38

9.917	0.41	0.00	0.121	O	|	|	|	1.41
10.000	0.42	0.00	0.124	O	|	|	|	1.44
10.083	0.43	0.00	0.127	O	|	|	|	1.47
10.167	0.43	0.00	0.130	O	|	|	|	1.50
10.250	0.44	0.00	0.133	O	|	|	|	1.52
10.333	0.45	0.00	0.136	O	|	|	|	1.55
10.417	0.46	0.00	0.139	O	|	|	|	1.58
10.500	0.47	0.00	0.142	O	|	|	|	1.60
10.583	0.48	0.00	0.146	O	|	|	|	1.63
10.667	0.49	0.00	0.149	O	|	|	|	1.66
10.750	0.49	0.00	0.152	O	|	|	|	1.69
10.833	0.50	0.00	0.156	O	|	|	|	1.71
10.917	0.51	0.00	0.159	O	|	|	|	1.74
11.000	0.52	0.00	0.163	O	|	|	|	1.77
11.083	0.53	0.00	0.166	O	|	|	|	1.80
11.167	0.54	0.00	0.170	O	|	|	|	1.83
11.250	0.55	0.00	0.174	O	|	|	|	1.87
11.333	0.57	0.00	0.178	O	|	|	|	1.90
11.417	0.58	0.00	0.182	O	|	|	|	1.93
11.500	0.59	0.00	0.186	O	|	|	|	1.96
11.583	0.60	0.00	0.190	O	|	|	|	2.00
11.667	0.61	0.00	0.194	O	|	|	|	2.03
11.750	0.62	0.00	0.198	O	|	|	|	2.07
11.833	0.64	0.00	0.203	O	|	|	|	2.10
11.917	0.65	0.00	0.207	O	|	|	|	2.14
12.000	0.66	0.00	0.212	O	|	|	|	2.18
12.083	0.68	0.00	0.216	O	|	|	|	2.22
12.167	0.69	0.00	0.221	O	|	|	|	2.26
12.250	0.71	0.00	0.226	OI	|	|	|	2.30
12.333	0.73	0.00	0.231	OI	|	|	|	2.34
12.417	0.74	0.00	0.236	OI	|	|	|	2.38
12.500	0.76	0.00	0.241	OI	|	|	|	2.42
12.583	0.77	0.00	0.246	OI	|	|	|	2.47
12.667	0.79	0.00	0.252	OI	|	|	|	2.51
12.750	0.81	0.00	0.257	OI	|	|	|	2.55
12.833	0.83	0.00	0.263	OI	|	|	|	2.60
12.917	0.85	0.00	0.268	OI	|	|	|	2.64
13.000	0.87	0.00	0.274	OI	|	|	|	2.69
13.083	0.89	0.00	0.280	OI	|	|	|	2.73
13.167	0.91	0.00	0.287	OI	|	|	|	2.78
13.250	0.93	0.00	0.293	OI	|	|	|	2.83
13.333	0.96	0.00	0.299	OI	|	|	|	2.88
13.417	0.98	0.00	0.306	OI	|	|	|	2.93
13.500	1.01	0.00	0.313	OI	|	|	|	2.98
13.583	1.03	0.00	0.320	OI	|	|	|	3.03
13.667	1.06	0.00	0.327	OI	|	|	|	3.09
13.750	1.09	0.00	0.335	OI	|	|	|	3.15
13.833	1.12	0.00	0.342	OI	|	|	|	3.20
13.917	1.15	0.00	0.350	OI	|	|	|	3.26
14.000	1.19	0.00	0.358	OI	|	|	|	3.33
14.083	1.23	0.00	0.366	OI	|	|	|	3.39
14.167	1.26	0.00	0.375	OI	|	|	|	3.45
14.250	1.31	0.00	0.384	OI	|	|	|	3.52
14.333	1.35	0.00	0.393	OI	|	|	|	3.59
14.417	1.40	0.00	0.402	OI	|	|	|	3.66
14.500	1.45	0.00	0.412	O I	|	|	|	3.73
14.583	1.50	0.00	0.422	O I	|	|	|	3.81
14.667	1.56	0.00	0.433	O I	|	|	|	3.88
14.750	1.62	0.00	0.444	O I	|	|	|	3.97
14.833	1.69	0.00	0.455	O I	|	|	|	4.05
14.917	1.76	0.00	0.467	O I	|	|	|	4.14
15.000	1.85	0.00	0.480	O I	|	|	|	4.23
15.083	1.94	0.00	0.493	O I	|	|	|	4.33
15.167	2.04	0.00	0.506	O I	|	|	|	4.43
15.250	2.15	0.00	0.521	O I	|	|	|	4.54
15.333	2.28	0.00	0.536	O I	|	|	|	4.65
15.417	2.40	0.00	0.552	O I	|	|	|	4.77
15.500	2.36	0.00	0.569	O I	|	|	|	4.89
15.583	2.27	0.00	0.584	O I	|	|	|	5.01

15.667	2.38	0.00	0.601	O I	|	|	|	5.12
15.750	2.65	0.04	0.618	O I	|	|	|	5.25
15.833	3.07	0.29	0.636	O I	|	|	|	5.39
15.917	3.74	0.73	0.656	O I	|	|	|	5.54
16.000	5.16	1.78	0.678	O I	|	|	|	5.71
16.083	9.37	3.32	0.711	O I	|	|	|	5.96
16.167	18.98	6.37	0.775	O I	|	|	|	6.45
16.250	22.45	7.91	0.869	O I	|	|	|	7.22
16.333	12.74	8.81	0.932	O I	|	|	|	7.81
16.417	6.06	8.86	0.936	O I	|	|	|	7.85
16.500	3.51	8.48	0.909	O I	|	|	|	7.57
16.583	3.03	8.00	0.875	O I	|	|	|	7.28
16.667	2.37	7.51	0.840	O I	|	|	|	6.98
16.750	2.12	7.03	0.806	O I	|	|	|	6.70
16.833	1.91	6.30	0.774	O I	|	|	|	6.44
16.917	1.75	5.04	0.747	O I	|	|	|	6.23
17.000	1.61	4.10	0.727	O I	|	|	|	6.08
17.083	1.49	3.38	0.712	O I	|	|	|	5.97
17.167	1.38	2.83	0.701	O I	|	|	|	5.88
17.250	1.29	2.41	0.692	O I	|	|	|	5.81
17.333	1.21	2.09	0.685	O I	|	|	|	5.76
17.417	1.14	1.83	0.679	O I	|	|	|	5.72
17.500	1.08	1.63	0.675	O I	|	|	|	5.68
17.583	1.02	1.47	0.672	O I	|	|	|	5.66
17.667	0.97	1.34	0.669	O	|	|	|	5.64
17.750	0.93	1.23	0.667	O	|	|	|	5.62
17.833	0.88	1.14	0.665	O	|	|	|	5.61
17.917	0.84	1.06	0.663	O	|	|	|	5.59
18.000	0.80	0.99	0.662	O	|	|	|	5.58
18.083	0.77	0.93	0.661	O	|	|	|	5.57
18.167	0.73	0.88	0.659	O	|	|	|	5.56
18.250	0.70	0.84	0.658	O	|	|	|	5.56
18.333	0.67	0.79	0.658	O	|	|	|	5.55
18.417	0.64	0.76	0.657	O	|	|	|	5.54
18.500	0.62	0.72	0.656	O	|	|	|	5.54
18.583	0.60	0.69	0.655	O	|	|	|	5.53
18.667	0.57	0.66	0.655	O	|	|	|	5.53
18.750	0.55	0.63	0.654	O	|	|	|	5.52
18.833	0.53	0.61	0.654	O	|	|	|	5.52
18.917	0.51	0.58	0.653	O	|	|	|	5.52
19.000	0.49	0.56	0.653	O	|	|	|	5.51
19.083	0.47	0.54	0.652	O	|	|	|	5.51
19.167	0.46	0.52	0.652	O	|	|	|	5.51
19.250	0.44	0.50	0.651	O	|	|	|	5.50
19.333	0.42	0.48	0.651	O	|	|	|	5.50
19.417	0.41	0.48	0.650	O	|	|	|	5.50
19.500	0.39	0.47	0.650	O	|	|	|	5.49
19.583	0.38	0.46	0.649	O	|	|	|	5.49
19.667	0.37	0.45	0.649	O	|	|	|	5.48
19.750	0.35	0.45	0.648	O	|	|	|	5.48
19.833	0.34	0.44	0.648	O	|	|	|	5.47
19.917	0.33	0.43	0.647	O	|	|	|	5.47
20.000	0.32	0.42	0.646	O	|	|	|	5.46
20.083	0.31	0.41	0.646	O	|	|	|	5.46
20.167	0.29	0.40	0.645	O	|	|	|	5.45
20.250	0.28	0.39	0.644	O	|	|	|	5.45
20.333	0.27	0.38	0.643	O	|	|	|	5.44
20.417	0.26	0.37	0.643	O	|	|	|	5.44
20.500	0.25	0.36	0.642	O	|	|	|	5.43
20.583	0.24	0.35	0.641	O	|	|	|	5.43
20.667	0.23	0.34	0.640	O	|	|	|	5.42
20.750	0.23	0.33	0.640	O	|	|	|	5.42
20.833	0.22	0.32	0.639	O	|	|	|	5.41
20.917	0.21	0.31	0.638	O	|	|	|	5.40
21.000	0.20	0.30	0.638	O	|	|	|	5.40
21.083	0.19	0.29	0.637	O	|	|	|	5.39
21.167	0.18	0.28	0.636	O	|	|	|	5.39
21.250	0.18	0.27	0.635	O	|	|	|	5.38
21.333	0.17	0.27	0.635	O	|	|	|	5.38

21.417	0.16	0.26	0.634	O					5.37
21.500	0.15	0.25	0.634	O					5.37
21.583	0.15	0.24	0.633	O					5.36
21.667	0.14	0.23	0.632	O					5.36
21.750	0.13	0.22	0.632	O					5.35
21.833	0.13	0.21	0.631	O					5.35
21.917	0.12	0.21	0.630	O					5.35
22.000	0.12	0.20	0.630	O					5.34
22.083	0.11	0.19	0.629	O					5.34
22.167	0.10	0.18	0.629	O					5.33
22.250	0.10	0.18	0.628	O					5.33
22.333	0.09	0.17	0.628	O					5.32
22.417	0.09	0.16	0.627	O					5.32
22.500	0.08	0.16	0.627	O					5.32
22.583	0.08	0.15	0.626	O					5.31
22.667	0.07	0.14	0.626	O					5.31
22.750	0.07	0.14	0.625	O					5.31
22.833	0.06	0.13	0.625	O					5.30
22.917	0.06	0.12	0.624	O					5.30
23.000	0.05	0.12	0.624	O					5.30
23.083	0.05	0.11	0.623	O					5.29
23.167	0.04	0.10	0.623	O					5.29
23.250	0.04	0.10	0.622	O					5.29
23.333	0.03	0.09	0.622	O					5.28
23.417	0.03	0.09	0.622	O					5.28
23.500	0.02	0.08	0.621	O					5.28
23.583	0.02	0.08	0.621	O					5.27
23.667	0.01	0.07	0.620	O					5.27
23.750	0.01	0.07	0.620	O					5.27
23.833	0.01	0.06	0.620	O					5.26
23.917	0.00	0.06	0.619	O					5.26
24.000	0.00	0.05	0.619	O					5.26
24.083	0.00	0.05	0.618	O					5.26
24.167	0.00	0.04	0.618	O					5.25
24.250	0.00	0.04	0.618	O					5.25
24.333	0.00	0.04	0.618	O					5.25
24.417	0.00	0.03	0.617	O					5.25
24.500	0.00	0.03	0.617	O					5.25
24.583	0.00	0.03	0.617	O					5.25
24.667	0.00	0.02	0.617	O					5.24
24.750	0.00	0.02	0.617	O					5.24
24.833	0.00	0.02	0.617	O					5.24
24.917	0.00	0.02	0.616	O					5.24
25.000	0.00	0.02	0.616	O					5.24
25.083	0.00	0.02	0.616	O					5.24
25.167	0.00	0.01	0.616	O					5.24
25.250	0.00	0.01	0.616	O					5.24
25.333	0.00	0.01	0.616	O					5.24
25.417	0.00	0.01	0.616	O					5.24
25.500	0.00	0.01	0.616	O					5.24
25.583	0.00	0.01	0.616	O					5.23
25.667	0.00	0.01	0.616	O					5.23
25.750	0.00	0.01	0.616	O					5.23
25.833	0.00	0.01	0.616	O					5.23
25.917	0.00	0.01	0.615	O					5.23
26.000	0.00	0.01	0.615	O					5.23
26.083	0.00	0.01	0.615	O					5.23
26.167	0.00	0.00	0.615	O					5.23
26.250	0.00	0.00	0.615	O					5.23
26.333	0.00	0.00	0.615	O					5.23
26.417	0.00	0.00	0.615	O					5.23
26.500	0.00	0.00	0.615	O					5.23
26.583	0.00	0.00	0.615	O					5.23
26.667	0.00	0.00	0.615	O					5.23
26.750	0.00	0.00	0.615	O					5.23
26.833	0.00	0.00	0.615	O					5.23
26.917	0.00	0.00	0.615	O					5.23
27.000	0.00	0.00	0.615	O					5.23
27.083	0.00	0.00	0.615	O					5.23

27.167	0.00	0.00	0.615	O	|	|	|	|	5.23
27.250	0.00	0.00	0.615	O	|	|	|	|	5.23
27.333	0.00	0.00	0.615	O	|	|	|	|	5.23
27.417	0.00	0.00	0.615	O	|	|	|	|	5.23
27.500	0.00	0.00	0.615	O	|	|	|	|	5.23
27.583	0.00	0.00	0.615	O	|	|	|	|	5.23

Remaining water in basin = 0.62 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 331
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.864 (CFS)
Total volume = 0.900 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.742	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	1.471	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018
Study date: 04/17/24

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
100-YEAR, 24-HOUR STORM
BY: JTS DATE: 04-17-24

Program License Serial Number 6320

******************** HYDROGRAPH INFORMATION **********************

From study/file name: DEVHYDA100.rte
**************************HYDROGRAPH DATA**************************
Number of intervals = 294
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 30.261 (CFS)
Total volume = 4.532 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++++++++++

Process from Point/Station 0.000 to Point/Station 0.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

All flow in excess of 0.74(CFS) is diverted
into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1) is 3.05(Ac.Ft)
++++++++++

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

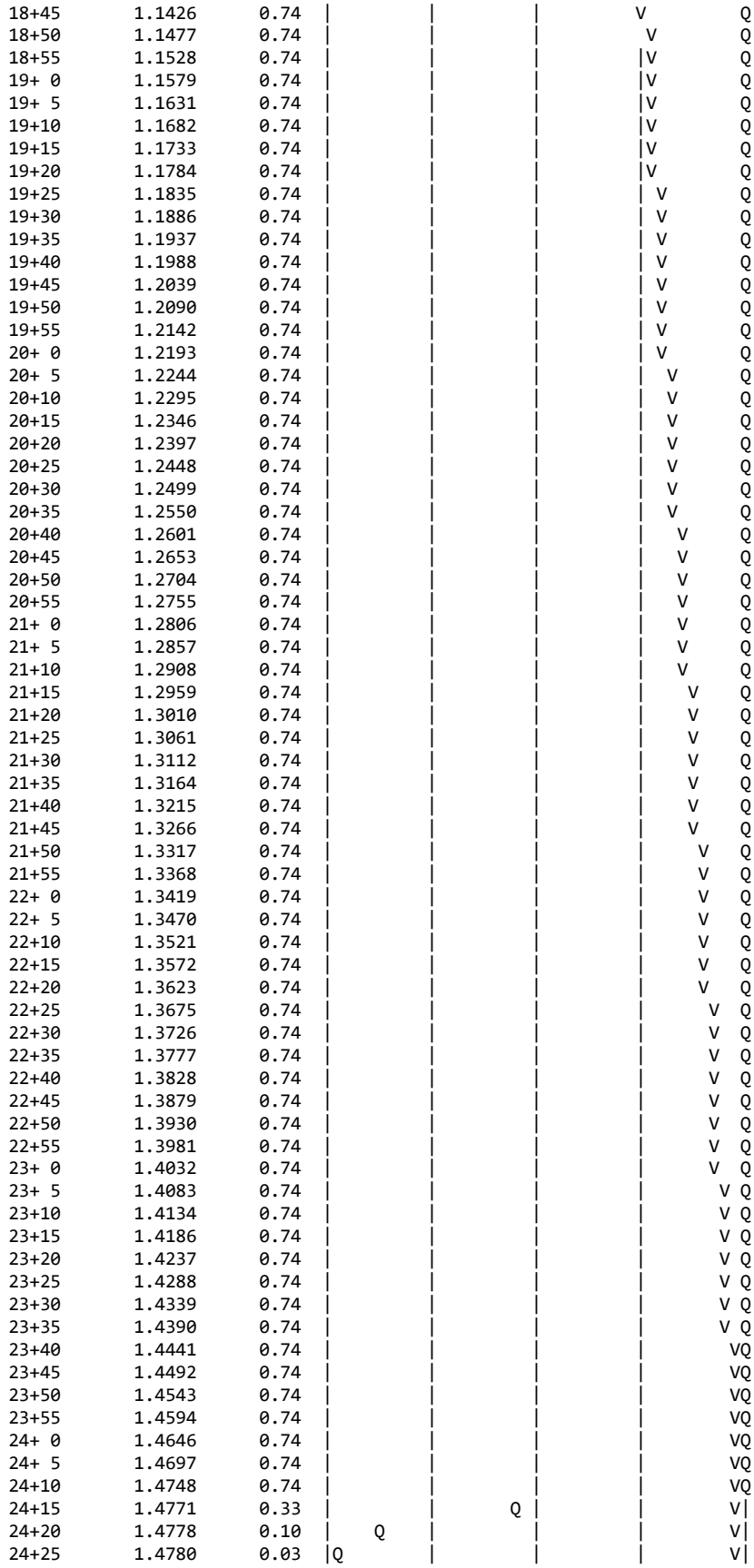
Hydrograph in 5 Minute intervals (CFS)

Time(h+m)	Volume(Ac.Ft)	Q(CFS)	0	0.2	0.4	0.6	0.7
0+ 5	0.0004	0.06	V Q				
0+10	0.0030	0.38	V		Q		
0+15	0.0081	0.74	V				Q
0+20	0.0133	0.74	V				Q
0+25	0.0184	0.74	V				Q
0+30	0.0235	0.74	V				Q
0+35	0.0286	0.74	V				Q
0+40	0.0337	0.74	V				Q
0+45	0.0388	0.74	V				Q
0+50	0.0439	0.74	V				Q
0+55	0.0490	0.74	V				Q
1+ 0	0.0541	0.74	V				Q
1+ 5	0.0592	0.74	V				Q
1+10	0.0644	0.74	V				Q
1+15	0.0695	0.74	V				Q
1+20	0.0746	0.74	V				Q
1+25	0.0797	0.74	V				Q

1+30	0.0848	0.74	V	|	|	|	Q
1+35	0.0899	0.74	V	|	|	|	Q
1+40	0.0950	0.74	V	|	|	|	Q
1+45	0.1001	0.74	V	|	|	|	Q
1+50	0.1052	0.74	V	|	|	|	Q
1+55	0.1104	0.74	V	|	|	|	Q
2+ 0	0.1155	0.74	V	|	|	|	Q
2+ 5	0.1206	0.74	V	|	|	|	Q
2+10	0.1257	0.74	V	|	|	|	Q
2+15	0.1308	0.74	V	|	|	|	Q
2+20	0.1359	0.74	V	|	|	|	Q
2+25	0.1410	0.74	V	|	|	|	Q
2+30	0.1461	0.74	V	|	|	|	Q
2+35	0.1512	0.74	V	|	|	|	Q
2+40	0.1563	0.74	V	|	|	|	Q
2+45	0.1615	0.74	V	|	|	|	Q
2+50	0.1666	0.74	V	|	|	|	Q
2+55	0.1717	0.74	V	|	|	|	Q
3+ 0	0.1768	0.74	V	|	|	|	Q
3+ 5	0.1819	0.74	V	|	|	|	Q
3+10	0.1870	0.74	V	|	|	|	Q
3+15	0.1921	0.74	V	|	|	|	Q
3+20	0.1972	0.74	V	|	|	|	Q
3+25	0.2023	0.74	V	|	|	|	Q
3+30	0.2074	0.74	V	|	|	|	Q
3+35	0.2126	0.74	V	|	|	|	Q
3+40	0.2177	0.74	V	|	|	|	Q
3+45	0.2228	0.74	V	|	|	|	Q
3+50	0.2279	0.74	V	|	|	|	Q
3+55	0.2330	0.74	V	|	|	|	Q
4+ 0	0.2381	0.74	V	|	|	|	Q
4+ 5	0.2432	0.74	V	|	|	|	Q
4+10	0.2483	0.74	V	|	|	|	Q
4+15	0.2534	0.74	V	|	|	|	Q
4+20	0.2585	0.74	V	|	|	|	Q
4+25	0.2637	0.74	V	|	|	|	Q
4+30	0.2688	0.74	V	|	|	|	Q
4+35	0.2739	0.74	V	|	|	|	Q
4+40	0.2790	0.74	V	|	|	|	Q
4+45	0.2841	0.74	V	|	|	|	Q
4+50	0.2892	0.74	V	|	|	|	Q
4+55	0.2943	0.74	V	|	|	|	Q
5+ 0	0.2994	0.74	V	|	|	|	Q
5+ 5	0.3045	0.74	V	|	|	|	Q
5+10	0.3096	0.74	V	|	|	|	Q
5+15	0.3148	0.74	V	|	|	|	Q
5+20	0.3199	0.74	V	|	|	|	Q
5+25	0.3250	0.74	V	|	|	|	Q
5+30	0.3301	0.74	V	|	|	|	Q
5+35	0.3352	0.74	V	|	|	|	Q
5+40	0.3403	0.74	V	|	|	|	Q
5+45	0.3454	0.74	V	|	|	|	Q
5+50	0.3505	0.74	V	|	|	|	Q
5+55	0.3556	0.74	V	|	|	|	Q
6+ 0	0.3607	0.74	V	|	|	|	Q
6+ 5	0.3659	0.74	V	|	|	|	Q
6+10	0.3710	0.74	V	|	|	|	Q
6+15	0.3761	0.74	V	|	|	|	Q
6+20	0.3812	0.74	V	|	|	|	Q
6+25	0.3863	0.74	V	|	|	|	Q
6+30	0.3914	0.74	V	|	|	|	Q
6+35	0.3965	0.74	V	|	|	|	Q
6+40	0.4016	0.74	V	|	|	|	Q
6+45	0.4067	0.74	V	|	|	|	Q
6+50	0.4119	0.74	V	|	|	|	Q
6+55	0.4170	0.74	V	|	|	|	Q
7+ 0	0.4221	0.74	V	|	|	|	Q
7+ 5	0.4272	0.74	V	|	|	|	Q
7+10	0.4323	0.74	V	|	|	|	Q

```
 7+15      0.4374     0.74  |        |V       |        |        Q
 7+20      0.4425     0.74  |        |V       |        |        Q
 7+25      0.4476     0.74  |        | V      |        |        Q
 7+30      0.4527     0.74  |        | V      |        |        Q
 7+35      0.4578     0.74  |        | V      |        |        Q
 7+40      0.4630     0.74  |        | V      |        |        Q
 7+45      0.4681     0.74  |        | V      |        |        Q
 7+50      0.4732     0.74  |        | V      |        |        Q
 7+55      0.4783     0.74  |        | V      |        |        Q
 8+ 0      0.4834     0.74  |        |  V     |        |        Q
 8+ 5      0.4885     0.74  |        |  V     |        |        Q
 8+10      0.4936     0.74  |        |  V     |        |        Q
 8+15      0.4987     0.74  |        |  V     |        |        Q
 8+20      0.5038     0.74  |        |  V     |        |        Q
 8+25      0.5089     0.74  |        |  V     |        |        Q
 8+30      0.5141     0.74  |        |  V     |        |        Q
 8+35      0.5192     0.74  |        |   V    |        |        Q
 8+40      0.5243     0.74  |        |   V    |        |        Q
 8+45      0.5294     0.74  |        |   V    |        |        Q
 8+50      0.5345     0.74  |        |   V    |        |        Q
 8+55      0.5396     0.74  |        |   V    |        |        Q
 9+ 0      0.5447     0.74  |        |   V    |        |        Q
 9+ 5      0.5498     0.74  |        |   V    |        |        Q
 9+10      0.5549     0.74  |        |    V   |        |        Q
 9+15      0.5600     0.74  |        |    V   |        |        Q
 9+20      0.5652     0.74  |        |    V   |        |        Q
 9+25      0.5703     0.74  |        |    V   |        |        Q
 9+30      0.5754     0.74  |        |    V   |        |        Q
 9+35      0.5805     0.74  |        |    V   |        |        Q
 9+40      0.5856     0.74  |        |    V   |        |        Q
 9+45      0.5907     0.74  |        |    V   |        |        Q
 9+50      0.5958     0.74  |        |     V  |        |        Q
 9+55      0.6009     0.74  |        |     V  |        |        Q
10+ 0      0.6060     0.74  |        |     V  |        |        Q
10+ 5      0.6111     0.74  |        |     V  |        |        Q
10+10      0.6163     0.74  |        |     V  |        |        Q
10+15      0.6214     0.74  |        |     V  |        |        Q
10+20      0.6265     0.74  |        |     V  |        |        Q
10+25      0.6316     0.74  |        |      V |        |        Q
10+30      0.6367     0.74  |        |      V |        |        Q
10+35      0.6418     0.74  |        |      V |        |        Q
10+40      0.6469     0.74  |        |      V |        |        Q
10+45      0.6520     0.74  |        |      V |        |        Q
10+50      0.6571     0.74  |        |      V |        |        Q
10+55      0.6623     0.74  |        |      V |        |        Q
11+ 0      0.6674     0.74  |        |       V|        |        Q
11+ 5      0.6725     0.74  |        |       V|        |        Q
11+10      0.6776     0.74  |        |       V|        |        Q
11+15      0.6827     0.74  |        |       V|        |        Q
11+20      0.6878     0.74  |        |       V|        |        Q
11+25      0.6929     0.74  |        |       V|        |        Q
11+30      0.6980     0.74  |        |       V|        |        Q
11+35      0.7031     0.74  |        |        V|        |        Q
11+40      0.7082     0.74  |        |        V|        |        Q
11+45      0.7134     0.74  |        |        V|        |        Q
11+50      0.7185     0.74  |        |        V|        |        Q
11+55      0.7236     0.74  |        |        V|        |        Q
12+ 0      0.7287     0.74  |        |        V|        |        Q
12+ 5      0.7338     0.74  |        |        V|        |        Q
12+10      0.7389     0.74  |        |        V|        |        Q
12+15      0.7440     0.74  |        |         V        |        Q
12+20      0.7491     0.74  |        |         V        |        Q
12+25      0.7542     0.74  |        |         V        |        Q
12+30      0.7593     0.74  |        |         V        |        Q
12+35      0.7645     0.74  |        |         V        |        Q
12+40      0.7696     0.74  |        |         V        |        Q
12+45      0.7747     0.74  |        |         V        |        Q
12+50      0.7798     0.74  |        |          V       |        Q
12+55      0.7849     0.74  |        |         |V       |        Q
```

```
13+ 0       0.7900      0.74  |         |         |V        |         Q
13+ 5       0.7951      0.74  |         |         |V        |         Q
13+10       0.8002      0.74  |         |         |V        |         Q
13+15       0.8053      0.74  |         |         |V        |         Q
13+20       0.8104      0.74  |         |         |V        |         Q
13+25       0.8156      0.74  |         |         | V       |         Q
13+30       0.8207      0.74  |         |         | V       |         Q
13+35       0.8258      0.74  |         |         | V       |         Q
13+40       0.8309      0.74  |         |         | V       |         Q
13+45       0.8360      0.74  |         |         | V       |         Q
13+50       0.8411      0.74  |         |         | V       |         Q
13+55       0.8462      0.74  |         |         | V       |         Q
14+ 0       0.8513      0.74  |         |         |  V      |         Q
14+ 5       0.8564      0.74  |         |         |  V      |         Q
14+10       0.8615      0.74  |         |         |  V      |         Q
14+15       0.8667      0.74  |         |         |  V      |         Q
14+20       0.8718      0.74  |         |         |  V      |         Q
14+25       0.8769      0.74  |         |         |  V      |         Q
14+30       0.8820      0.74  |         |         |  V      |         Q
14+35       0.8871      0.74  |         |         |   V     |         Q
14+40       0.8922      0.74  |         |         |   V     |         Q
14+45       0.8973      0.74  |         |         |   V     |         Q
14+50       0.9024      0.74  |         |         |   V     |         Q
14+55       0.9075      0.74  |         |         |   V     |         Q
15+ 0       0.9127      0.74  |         |         |   V     |         Q
15+ 5       0.9178      0.74  |         |         |   V     |         Q
15+10       0.9229      0.74  |         |         |   V     |         Q
15+15       0.9280      0.74  |         |         |    V    |         Q
15+20       0.9331      0.74  |         |         |    V    |         Q
15+25       0.9382      0.74  |         |         |    V    |         Q
15+30       0.9433      0.74  |         |         |    V    |         Q
15+35       0.9484      0.74  |         |         |    V    |         Q
15+40       0.9535      0.74  |         |         |    V    |         Q
15+45       0.9586      0.74  |         |         |    V    |         Q
15+50       0.9638      0.74  |         |         |     V   |         Q
15+55       0.9689      0.74  |         |         |     V   |         Q
16+ 0       0.9740      0.74  |         |         |     V   |         Q
16+ 5       0.9791      0.74  |         |         |     V   |         Q
16+10       0.9842      0.74  |         |         |     V   |         Q
16+15       0.9893      0.74  |         |         |     V   |         Q
16+20       0.9944      0.74  |         |         |     V   |         Q
16+25       0.9995      0.74  |         |         |      V  |         Q
16+30       1.0046      0.74  |         |         |      V  |         Q
16+35       1.0097      0.74  |         |         |      V  |         Q
16+40       1.0149      0.74  |         |         |      V  |         Q
16+45       1.0200      0.74  |         |         |      V  |         Q
16+50       1.0251      0.74  |         |         |      V  |         Q
16+55       1.0302      0.74  |         |         |      V  |         Q
17+ 0       1.0353      0.74  |         |         |       V |         Q
17+ 5       1.0404      0.74  |         |         |       V |         Q
17+10       1.0455      0.74  |         |         |       V |         Q
17+15       1.0506      0.74  |         |         |       V |         Q
17+20       1.0557      0.74  |         |         |       V |         Q
17+25       1.0608      0.74  |         |         |       V |         Q
17+30       1.0660      0.74  |         |         |       V |         Q
17+35       1.0711      0.74  |         |         |       V |         Q
17+40       1.0762      0.74  |         |         |        V|         Q
17+45       1.0813      0.74  |         |         |        V|         Q
17+50       1.0864      0.74  |         |         |        V|         Q
17+55       1.0915      0.74  |         |         |        V|         Q
18+ 0       1.0966      0.74  |         |         |        V|         Q
18+ 5       1.1017      0.74  |         |         |        V|         Q
18+10       1.1068      0.74  |         |         |        V|         Q
18+15       1.1119      0.74  |         |         |         V         Q
18+20       1.1171      0.74  |         |         |         V         Q
18+25       1.1222      0.74  |         |         |         V         Q
18+30       1.1273      0.74  |         |         |         V         Q
18+35       1.1324      0.74  |         |         |         V         Q
18+40       1.1375      0.74  |         |         |         V         Q
```


18+45 1.1426 0.74
18+50 1.1477 0.74
18+55 1.1528 0.74
19+ 0 1.1579 0.74
19+ 5 1.1631 0.74
19+10 1.1682 0.74
19+15 1.1733 0.74
19+20 1.1784 0.74
19+25 1.1835 0.74
19+30 1.1886 0.74
19+35 1.1937 0.74
19+40 1.1988 0.74
19+45 1.2039 0.74
19+50 1.2090 0.74
19+55 1.2142 0.74
20+ 0 1.2193 0.74
20+ 5 1.2244 0.74
20+10 1.2295 0.74
20+15 1.2346 0.74
20+20 1.2397 0.74
20+25 1.2448 0.74
20+30 1.2499 0.74
20+35 1.2550 0.74
20+40 1.2601 0.74
20+45 1.2653 0.74
20+50 1.2704 0.74
20+55 1.2755 0.74
21+ 0 1.2806 0.74
21+ 5 1.2857 0.74
21+10 1.2908 0.74
21+15 1.2959 0.74
21+20 1.3010 0.74
21+25 1.3061 0.74
21+30 1.3112 0.74
21+35 1.3164 0.74
21+40 1.3215 0.74
21+45 1.3266 0.74
21+50 1.3317 0.74
21+55 1.3368 0.74
22+ 0 1.3419 0.74
22+ 5 1.3470 0.74
22+10 1.3521 0.74
22+15 1.3572 0.74
22+20 1.3623 0.74
22+25 1.3675 0.74
22+30 1.3726 0.74
22+35 1.3777 0.74
22+40 1.3828 0.74
22+45 1.3879 0.74
22+50 1.3930 0.74
22+55 1.3981 0.74
23+ 0 1.4032 0.74
23+ 5 1.4083 0.74
23+10 1.4134 0.74
23+15 1.4186 0.74
23+20 1.4237 0.74
23+25 1.4288 0.74
23+30 1.4339 0.74
23+35 1.4390 0.74
23+40 1.4441 0.74
23+45 1.4492 0.74
23+50 1.4543 0.74
23+55 1.4594 0.74
24+ 0 1.4646 0.74
24+ 5 1.4697 0.74
24+10 1.4748 0.74
24+15 1.4771 0.33
24+20 1.4778 0.10
24+25 1.4780 0.03

```
  24+30       1.4781      0.01  Q         |         |         |         V
-------------------------------------------------------------------------
       ***************************HYDROGRAPH DATA***************************
                    Number of intervals =   294
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        0.742 (CFS)
                    Total volume =       1.478 (Ac.Ft)
             Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
             Peak (CFS)     29.519     0.000     0.000     0.000     0.000
             Vol (Ac.Ft)      3.054     0.000     0.000     0.000     0.000
       *********************************************************************

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


       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        0.000 to Point/Station        0.000
       **** STORE OR DELETE CURRENT HYDROGRAPH ****
       _____________________________________________________________________
       Current stream hydrograph of   5.0 minute
       intervals has been stored as stream number 2 with
       a starting time of   0.00 hours and ending time of 333.33 hours
       With a total volume of       1.48(Ac.Ft)
       ***************************HYDROGRAPH DATA***************************
                    Number of intervals =     0
                    Time interval =    0.0 (Min.)
                    Maximum/Peak flow rate =        0.000 (CFS)
                    Total volume =       0.000 (Ac.Ft)
             Status of hydrographs being held in storage
                       Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
             Peak (CFS)     29.519     0.742     0.000     0.000     0.000
             Vol (Ac.Ft)      3.054     1.478     0.000     0.000     0.000
       *********************************************************************

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


       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        1.000 to Point/Station        1.000
       **** ADD/COMBINE/RECOVER HYDROGRAPHS ****
       _____________________________________________________________________
       From stored stream number 1 the total
       volume of       3.05 (Ac.Ft) is being added to the
       current hydrograph at its original rate from user
       with a delay time to start of addition of    0.00 hours.
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        P R I N T  O F  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) Add q(CFS)  Tot. Q   0        7.4      14.8      22.1      29.5
  ---------------------------------------------------------------------------
    0+ 5       0.0000      0.00  Q         |         |         |         |
    0+10       0.0000      0.00  Q         |         |         |         |
    0+15       0.1136      0.11  Q         |         |         |         |
    0+20       0.3473      0.35  Q         |         |         |         |
    0+25       0.4218      0.42  Q         |         |         |         |
    0+30       0.4412      0.44  Q         |         |         |         |
    0+35       0.4566      0.46  Q         |         |         |         |
    0+40       0.4595      0.46  Q         |         |         |         |
    0+45       0.4626      0.46  Q         |         |         |         |
    0+50       0.4656      0.47  Q         |         |         |         |
    0+55       0.4687      0.47  Q         |         |         |         |
    1+ 0       0.4717      0.47  Q         |         |         |         |
    1+ 5       0.4749      0.47  Q         |         |         |         |
    1+10       0.4780      0.48  Q         |         |         |         |
```

1+15	0.4812	0.48	Q	|	|	|	|
1+20	0.4844	0.48	Q	|	|	|	|
1+25	0.4876	0.49	Q	|	|	|	|
1+30	0.4908	0.49	Q	|	|	|	|
1+35	0.4941	0.49	Q	|	|	|	|
1+40	0.4974	0.50	Q	|	|	|	|
1+45	0.5008	0.50	Q	|	|	|	|
1+50	0.5041	0.50	Q	|	|	|	|
1+55	0.5075	0.51	Q	|	|	|	|
2+ 0	0.5109	0.51	Q	|	|	|	|
2+ 5	0.5144	0.51	Q	|	|	|	|
2+10	0.5178	0.52	Q	|	|	|	|
2+15	0.5213	0.52	Q	|	|	|	|
2+20	0.5248	0.52	Q	|	|	|	|
2+25	0.5284	0.53	Q	|	|	|	|
2+30	0.5320	0.53	Q	|	|	|	|
2+35	0.5357	0.54	Q	|	|	|	|
2+40	0.5393	0.54	Q	|	|	|	|
2+45	0.5430	0.54	Q	|	|	|	|
2+50	0.5467	0.55	Q	|	|	|	|
2+55	0.5505	0.55	Q	|	|	|	|
3+ 0	0.5543	0.55	Q	|	|	|	|
3+ 5	0.5581	0.56	Q	|	|	|	|
3+10	0.5620	0.56	Q	|	|	|	|
3+15	0.5659	0.57	Q	|	|	|	|
3+20	0.5698	0.57	Q	|	|	|	|
3+25	0.5738	0.57	Q	|	|	|	|
3+30	0.5778	0.58	Q	|	|	|	|
3+35	0.5819	0.58	Q	|	|	|	|
3+40	0.5859	0.59	Q	|	|	|	|
3+45	0.5901	0.59	Q	|	|	|	|
3+50	0.5943	0.59	Q	|	|	|	|
3+55	0.5985	0.60	Q	|	|	|	|
4+ 0	0.6027	0.60	Q	|	|	|	|
4+ 5	0.6071	0.61	Q	|	|	|	|
4+10	0.6114	0.61	Q	|	|	|	|
4+15	0.6158	0.62	Q	|	|	|	|
4+20	0.6202	0.62	Q	|	|	|	|
4+25	0.6247	0.62	Q	|	|	|	|
4+30	0.6292	0.63	Q	|	|	|	|
4+35	0.6338	0.63	Q	|	|	|	|
4+40	0.6384	0.64	Q	|	|	|	|
4+45	0.6431	0.64	Q	|	|	|	|
4+50	0.6478	0.65	Q	|	|	|	|
4+55	0.6526	0.65	Q	|	|	|	|
5+ 0	0.6574	0.66	Q	|	|	|	|
5+ 5	0.6623	0.66	Q	|	|	|	|
5+10	0.6672	0.67	Q	|	|	|	|
5+15	0.6722	0.67	Q	|	|	|	|
5+20	0.6772	0.68	Q	|	|	|	|
5+25	0.6824	0.68	Q	|	|	|	|
5+30	0.6875	0.69	Q	|	|	|	|
5+35	0.6928	0.69	Q	|	|	|	|
5+40	0.6980	0.70	Q	|	|	|	|
5+45	0.7034	0.70	Q	|	|	|	|
5+50	0.7087	0.71	Q	|	|	|	|
5+55	0.7142	0.71	Q	|	|	|	|
6+ 0	0.7197	0.72	Q	|	|	|	|
6+ 5	0.7254	0.73	Q	|	|	|	|
6+10	0.7310	0.73	Q	|	|	|	|
6+15	0.7368	0.74	Q	|	|	|	|
6+20	0.7425	0.74	|Q	|	|	|	|
6+25	0.7484	0.75	|Q	|	|	|	|
6+30	0.7543	0.75	|Q	|	|	|	|
6+35	0.7604	0.76	|Q	|	|	|	|
6+40	0.7664	0.77	|Q	|	|	|	|
6+45	0.7727	0.77	|Q	|	|	|	|
6+50	0.7789	0.78	|Q	|	|	|	|
6+55	0.7853	0.79	|Q	|	|	|	|

7+ 0	0.7916	0.79	Q				
7+ 5	0.7982	0.80	Q				
7+10	0.8048	0.80	Q				
7+15	0.8115	0.81	Q				
7+20	0.8182	0.82	Q				
7+25	0.8252	0.83	Q				
7+30	0.8321	0.83	Q				
7+35	0.8392	0.84	Q				
7+40	0.8463	0.85	Q				
7+45	0.8537	0.85	Q				
7+50	0.8609	0.86	Q				
7+55	0.8685	0.87	Q				
8+ 0	0.8760	0.88	Q				
8+ 5	0.8838	0.88	Q				
8+10	0.8916	0.89	Q				
8+15	0.8996	0.90	Q				
8+20	0.9076	0.91	Q				
8+25	0.9159	0.92	Q				
8+30	0.9241	0.92	Q				
8+35	0.9326	0.93	Q				
8+40	0.9411	0.94	Q				
8+45	0.9500	0.95	Q				
8+50	0.9587	0.96	Q				
8+55	0.9679	0.97	Q				
9+ 0	0.9769	0.98	Q				
9+ 5	0.9864	0.99	Q				
9+10	0.9958	1.00	Q				
9+15	1.0055	1.01	Q				
9+20	1.0152	1.02	Q				
9+25	1.0254	1.03	Q				
9+30	1.0354	1.04	Q				
9+35	1.0459	1.05	Q				
9+40	1.0564	1.06	Q				
9+45	1.0673	1.07	Q				
9+50	1.0781	1.08	Q				
9+55	1.0894	1.09	Q				
10+ 0	1.1007	1.10	Q				
10+ 5	1.1124	1.11	Q				
10+10	1.1241	1.12	Q				
10+15	1.1364	1.14	Q				
10+20	1.1486	1.15	Q				
10+25	1.1613	1.16	Q				
10+30	1.1741	1.17	Q				
10+35	1.1874	1.19	Q				
10+40	1.2007	1.20	Q				
10+45	1.2146	1.21	Q				
10+50	1.2284	1.23	Q				
10+55	1.2430	1.24	Q				
11+ 0	1.2575	1.26	Q				
11+ 5	1.2727	1.27	Q				
11+10	1.2880	1.29	Q				
11+15	1.3039	1.30	Q				
11+20	1.3199	1.32	Q				
11+25	1.3367	1.34	Q				
11+30	1.3535	1.35	Q				
11+35	1.3712	1.37	Q				
11+40	1.3889	1.39	Q				
11+45	1.4076	1.41	Q				
11+50	1.4263	1.43	Q				
11+55	1.4459	1.45	Q				
12+ 0	1.4657	1.47	Q				
12+ 5	1.4812	1.48	Q				
12+10	1.4728	1.47	Q				
12+15	1.4518	1.45	Q				
12+20	1.4531	1.45	Q				
12+25	1.4702	1.47	Q				
12+30	1.4926	1.49	Q				
12+35	1.5167	1.52	Q				
12+40	1.5422	1.54	Q				

12+45	1.5693	1.57	Q				
12+50	1.5967	1.60	Q				
12+55	1.6258	1.63	Q				
13+ 0	1.6553	1.66	Q				
13+ 5	1.6867	1.69	Q				
13+10	1.7187	1.72	Q				
13+15	1.7527	1.75	Q				
13+20	1.7873	1.79	Q				
13+25	1.8243	1.82	Q				
13+30	1.8622	1.86	Q				
13+35	1.9027	1.90	Q				
13+40	1.9442	1.94	Q				
13+45	1.9887	1.99	Q				
13+50	2.0345	2.03	Q				
13+55	2.0838	2.08	Q				
14+ 0	2.1348	2.13	Q				
14+ 5	2.1899	2.19	Q				
14+10	2.2476	2.25	Q				
14+15	2.3103	2.31	Q				
14+20	2.3753	2.38	Q				
14+25	2.4459	2.45	Q				
14+30	2.5198	2.52	Q				
14+35	2.6008	2.60	Q				
14+40	2.6866	2.69	Q				
14+45	2.7812	2.78	Q				
14+50	2.8822	2.88	Q				
14+55	2.9949	2.99	Q				
15+ 0	3.1165	3.12	Q				
15+ 5	3.2536	3.25	Q				
15+10	3.4039	3.40	Q				
15+15	3.5760	3.58	Q				
15+20	3.7686	3.77	Q				
15+25	3.9389	3.94	Q				
15+30	3.8958	3.90	Q				
15+35	3.7646	3.76	Q				
15+40	3.9213	3.92	Q				
15+45	4.3343	4.33	Q				
15+50	4.9636	4.96	Q				
15+55	5.9573	5.96	Q				
16+ 0	7.9489	7.95	Q				
16+ 5	13.3724	13.37		Q			
16+10	25.2711	25.27				Q	
16+15	29.5187	29.52					Q
16+20	17.3919	17.39			Q		
16+25	8.8272	8.83	Q				
16+30	5.4653	5.47	Q				
16+35	4.7827	4.78	Q				
16+40	3.8988	3.90	Q				
16+45	3.5258	3.53	Q				
16+50	3.2156	3.22	Q				
16+55	2.9691	2.97	Q				
17+ 0	2.7571	2.76	Q				
17+ 5	2.5786	2.58	Q				
17+10	2.4249	2.42	Q				
17+15	2.2908	2.29	Q				
17+20	2.1729	2.17	Q				
17+25	2.0681	2.07	Q				
17+30	1.9742	1.97	Q				
17+35	1.8892	1.89	Q				
17+40	1.8118	1.81	Q				
17+45	1.7410	1.74	Q				
17+50	1.6758	1.68	Q				
17+55	1.6156	1.62	Q				
18+ 0	1.5597	1.56	Q				
18+ 5	1.5130	1.51	Q				
18+10	1.4939	1.49	Q				
18+15	1.4914	1.49	Q				
18+20	1.4698	1.47	Q				
18+25	1.4361	1.44	Q				

18+30	1.3996	1.40	|Q	|	|	|	|
18+35	1.3647	1.36	|Q	|	|	|	|
18+40	1.3305	1.33	|Q	|	|	|	|
18+45	1.2980	1.30	|Q	|	|	|	|
18+50	1.2670	1.27	|Q	|	|	|	|
18+55	1.2375	1.24	|Q	|	|	|	|
19+ 0	1.2093	1.21	|Q	|	|	|	|
19+ 5	1.1823	1.18	|Q	|	|	|	|
19+10	1.1565	1.16	|Q	|	|	|	|
19+15	1.1317	1.13	|Q	|	|	|	|
19+20	1.1079	1.11	|Q	|	|	|	|
19+25	1.0851	1.09	|Q	|	|	|	|
19+30	1.0631	1.06	|Q	|	|	|	|
19+35	1.0419	1.04	|Q	|	|	|	|
19+40	1.0215	1.02	|Q	|	|	|	|
19+45	1.0018	1.00	|Q	|	|	|	|
19+50	0.9827	0.98	|Q	|	|	|	|
19+55	0.9643	0.96	|Q	|	|	|	|
20+ 0	0.9465	0.95	|Q	|	|	|	|
20+ 5	0.9293	0.93	|Q	|	|	|	|
20+10	0.9126	0.91	|Q	|	|	|	|
20+15	0.8965	0.90	|Q	|	|	|	|
20+20	0.8808	0.88	|Q	|	|	|	|
20+25	0.8656	0.87	|Q	|	|	|	|
20+30	0.8508	0.85	|Q	|	|	|	|
20+35	0.8364	0.84	|Q	|	|	|	|
20+40	0.8224	0.82	|Q	|	|	|	|
20+45	0.8089	0.81	|Q	|	|	|	|
20+50	0.7956	0.80	|Q	|	|	|	|
20+55	0.7828	0.78	|Q	|	|	|	|
21+ 0	0.7702	0.77	|Q	|	|	|	|
21+ 5	0.7580	0.76	|Q	|	|	|	|
21+10	0.7461	0.75	|Q	|	|	|	|
21+15	0.7345	0.73	Q	|	|	|	|
21+20	0.7231	0.72	Q	|	|	|	|
21+25	0.7121	0.71	Q	|	|	|	|
21+30	0.7012	0.70	Q	|	|	|	|
21+35	0.6907	0.69	Q	|	|	|	|
21+40	0.6803	0.68	Q	|	|	|	|
21+45	0.6702	0.67	Q	|	|	|	|
21+50	0.6604	0.66	Q	|	|	|	|
21+55	0.6507	0.65	Q	|	|	|	|
22+ 0	0.6413	0.64	Q	|	|	|	|
22+ 5	0.6320	0.63	Q	|	|	|	|
22+10	0.6229	0.62	Q	|	|	|	|
22+15	0.6140	0.61	Q	|	|	|	|
22+20	0.6053	0.61	Q	|	|	|	|
22+25	0.5968	0.60	Q	|	|	|	|
22+30	0.5885	0.59	Q	|	|	|	|
22+35	0.5803	0.58	Q	|	|	|	|
22+40	0.5722	0.57	Q	|	|	|	|
22+45	0.5643	0.56	Q	|	|	|	|
22+50	0.5566	0.56	Q	|	|	|	|
22+55	0.5490	0.55	Q	|	|	|	|
23+ 0	0.5415	0.54	Q	|	|	|	|
23+ 5	0.5342	0.53	Q	|	|	|	|
23+10	0.5270	0.53	Q	|	|	|	|
23+15	0.5199	0.52	Q	|	|	|	|
23+20	0.5130	0.51	Q	|	|	|	|
23+25	0.5061	0.51	Q	|	|	|	|
23+30	0.4994	0.50	Q	|	|	|	|
23+35	0.4928	0.49	Q	|	|	|	|
23+40	0.4863	0.49	Q	|	|	|	|
23+45	0.4799	0.48	Q	|	|	|	|
23+50	0.4736	0.47	Q	|	|	|	|
23+55	0.4674	0.47	Q	|	|	|	|
24+ 0	0.4614	0.46	Q	|	|	|	|
24+ 5	0.3967	0.40	Q	|	|	|	|
24+10	0.0684	0.07	Q	|	|	|	|

```
   24+15       0.0000      0.00  Q         |         |         |         |
   24+20       0.0000      0.00  Q         |         |         |         |
   24+25       0.0000      0.00  Q         |         |         |         |
   24+30       0.0000      0.00  Q         |         |         |         |
   24+35       0.0000      0.00  Q         |         |         |         |
-------------------------------------------------------------------------
        ****************************HYDROGRAPH DATA****************************
                      Number of intervals =   295
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =       29.519 (CFS)
                      Total volume =       3.054 (Ac.Ft)
               Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
               Peak (CFS)      0.000     0.742     0.000     0.000     0.000
               Vol (Ac.Ft)      0.000     1.478     0.000     0.000     0.000
        *************************************************************************

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

        +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
        Process from Point/Station        0.000 to Point/Station        1.000
        **** RETARDING BASIN ROUTING ****
        _________________________________________________________________________

        Program computation of outflow v. depth




        CALCULATED OUTFLOW DATA AT DEPTH =    0.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.23(Ft.))
        Total outflow at this depth =      0.00(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
        Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
        Manning's N = 0.013   No. of pipes = 1
        Given pipe size =     15.00(In.)
        Calculated individual pipe flow  =     0.482(CFS)
        Normal flow depth in pipe =    3.29(In.)
        Flow top width inside pipe =   12.42(In.)
        Critical Depth =    0.27(Ft.)
        Calculated flow rate through pipe(s) =      0.482(CFS)

        Total outflow at this depth =      0.48(CFS)


        CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
```

```
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.770(Ft.)
Pipe friction loss =      1.075(Ft.)
Minor friction loss =      0.694(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.698(CFS)

Total outflow at this depth =      6.70(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      2.770(Ft.)
Pipe friction loss =      1.683(Ft.)
Minor friction loss =      1.086(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      8.379(CFS)

Total outflow at this depth =      8.38(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.770(Ft.)
Pipe friction loss =      2.290(Ft.)
Minor friction loss =      1.478(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      9.775(CFS)

Total outflow at this depth =      9.78(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =   10.00(Ft.))
Pipe length  =   100.00(Ft.)   Elevation difference =   0.50(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     15.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.270(Ft.)
Pipe friction loss =      3.201(Ft.)
Minor friction loss =      2.066(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =     11.558(CFS)

Total outflow at this depth =     11.56(CFS)

----------------------------------------------------------------------
Total number of inflow hydrograph intervals = 295
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
----------------------------------------------------------------------
----------------------------------------------------------------------
Initial basin depth =   0.00 (Ft.)
Initial basin storage =      0.00 (Ac.Ft)
Initial basin outflow =   0.00 (CFS)
----------------------------------------------------------------------
----------------------------------------------------------------------
Depth vs. Storage and Depth vs. Discharge data:
 Basin Depth  Storage    Outflow   (S-O*dt/2)   (S+O*dt/2)
     (Ft.)    (Ac.Ft)    (CFS)     (Ac.Ft)    (Ac.Ft)
----------------------------------------------------------------------
```

0.000	0.000	0.000	0.000	0.000
0.500	0.033	0.000	0.033	0.033
1.500	0.130	0.000	0.130	0.130
2.500	0.250	0.000	0.250	0.250
3.500	0.381	0.000	0.381	0.381
4.500	0.516	0.000	0.516	0.516
5.230	0.615	0.000	0.615	0.615
5.500	0.651	0.482	0.649	0.653
6.500	0.782	6.698	0.759	0.805
7.500	0.902	8.379	0.873	0.931
8.500	1.000	9.775	0.966	1.034
10.000	1.098	11.558	1.058	1.138

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	7.4	14.76	22.14	29.52	Depth (Ft.)
0.083	0.00	0.00	0.000	O					0.00
0.167	0.00	0.00	0.000	O					0.00
0.250	0.11	0.00	0.000	O					0.01
0.333	0.35	0.00	0.002	O					0.03
0.417	0.42	0.00	0.005	O					0.07
0.500	0.44	0.00	0.008	O					0.12
0.583	0.46	0.00	0.011	O					0.16
0.667	0.46	0.00	0.014	O					0.21
0.750	0.46	0.00	0.017	O					0.26
0.833	0.47	0.00	0.020	O					0.31
0.917	0.47	0.00	0.023	O					0.36
1.000	0.47	0.00	0.027	O					0.40
1.083	0.47	0.00	0.030	O					0.45
1.167	0.48	0.00	0.033	O					0.50
1.250	0.48	0.00	0.037	O					0.54
1.333	0.48	0.00	0.040	O					0.57
1.417	0.49	0.00	0.043	O					0.61
1.500	0.49	0.00	0.047	O					0.64
1.583	0.49	0.00	0.050	O					0.67
1.667	0.50	0.00	0.053	O					0.71
1.750	0.50	0.00	0.057	O					0.75
1.833	0.50	0.00	0.060	O					0.78
1.917	0.51	0.00	0.064	O					0.82
2.000	0.51	0.00	0.067	O					0.85
2.083	0.51	0.00	0.071	O					0.89
2.167	0.52	0.00	0.074	O					0.93
2.250	0.52	0.00	0.078	O					0.96
2.333	0.52	0.00	0.082	O					1.00
2.417	0.53	0.00	0.085	O					1.04
2.500	0.53	0.00	0.089	O					1.08
2.583	0.54	0.00	0.092	O					1.11
2.667	0.54	0.00	0.096	O					1.15
2.750	0.54	0.00	0.100	O					1.19
2.833	0.55	0.00	0.104	O					1.23
2.917	0.55	0.00	0.107	O					1.27
3.000	0.55	0.00	0.111	O					1.31
3.083	0.56	0.00	0.115	O					1.35
3.167	0.56	0.00	0.119	O					1.39
3.250	0.57	0.00	0.123	O					1.43
3.333	0.57	0.00	0.127	O					1.47
3.417	0.57	0.00	0.131	O					1.51
3.500	0.58	0.00	0.135	O					1.54
3.583	0.58	0.00	0.139	O					1.57
3.667	0.59	0.00	0.143	O					1.61
3.750	0.59	0.00	0.147	O					1.64
3.833	0.59	0.00	0.151	O					1.67
3.917	0.60	0.00	0.155	O					1.71
4.000	0.60	0.00	0.159	O					1.74
4.083	0.61	0.00	0.163	O					1.78

4.167	0.61	0.00	0.167	O				1.81
4.250	0.62	0.00	0.172	O				1.85
4.333	0.62	0.00	0.176	O				1.88
4.417	0.62	0.00	0.180	O				1.92
4.500	0.63	0.00	0.184	O				1.95
4.583	0.63	0.00	0.189	O				1.99
4.667	0.64	0.00	0.193	O				2.03
4.750	0.64	0.00	0.198	O				2.06
4.833	0.65	0.00	0.202	O				2.10
4.917	0.65	0.00	0.207	O				2.14
5.000	0.66	0.00	0.211	O				2.18
5.083	0.66	0.00	0.216	O				2.21
5.167	0.67	0.00	0.220	O				2.25
5.250	0.67	0.00	0.225	O				2.29
5.333	0.68	0.00	0.229	O				2.33
5.417	0.68	0.00	0.234	O				2.37
5.500	0.69	0.00	0.239	O				2.41
5.583	0.69	0.00	0.244	O				2.45
5.667	0.70	0.00	0.248	O				2.49
5.750	0.70	0.00	0.253	O				2.52
5.833	0.71	0.00	0.258	O				2.56
5.917	0.71	0.00	0.263	O				2.60
6.000	0.72	0.00	0.268	O				2.64
6.083	0.73	0.00	0.273	O				2.67
6.167	0.73	0.00	0.278	O				2.71
6.250	0.74	0.00	0.283	O				2.75
6.333	0.74	0.00	0.288	O				2.79
6.417	0.75	0.00	0.293	O				2.83
6.500	0.75	0.00	0.298	O				2.87
6.583	0.76	0.00	0.304	O				2.91
6.667	0.77	0.00	0.309	O				2.95
6.750	0.77	0.00	0.314	O				2.99
6.833	0.78	0.00	0.319	O				3.03
6.917	0.79	0.00	0.325	O				3.07
7.000	0.79	0.00	0.330	O				3.11
7.083	0.80	0.00	0.336	O				3.15
7.167	0.80	0.00	0.341	O				3.20
7.250	0.81	0.00	0.347	O				3.24
7.333	0.82	0.00	0.352	O				3.28
7.417	0.83	0.00	0.358	O				3.33
7.500	0.83	0.00	0.364	O				3.37
7.583	0.84	0.00	0.370	O				3.41
7.667	0.85	0.00	0.375	O				3.46
7.750	0.85	0.00	0.381	O				3.50
7.833	0.86	0.00	0.387	O				3.55
7.917	0.87	0.00	0.393	O				3.59
8.000	0.88	0.00	0.399	O				3.63
8.083	0.88	0.00	0.405	O				3.68
8.167	0.89	0.00	0.411	O				3.72
8.250	0.90	0.00	0.417	O				3.77
8.333	0.91	0.00	0.424	O				3.82
8.417	0.92	0.00	0.430	O				3.86
8.500	0.92	0.00	0.436	OI				3.91
8.583	0.93	0.00	0.443	OI				3.96
8.667	0.94	0.00	0.449	OI				4.00
8.750	0.95	0.00	0.456	OI				4.05
8.833	0.96	0.00	0.462	OI				4.10
8.917	0.97	0.00	0.469	OI				4.15
9.000	0.98	0.00	0.476	OI				4.20
9.083	0.99	0.00	0.482	OI				4.25
9.167	1.00	0.00	0.489	OI				4.30
9.250	1.01	0.00	0.496	OI				4.35
9.333	1.02	0.00	0.503	OI				4.40
9.417	1.03	0.00	0.510	OI				4.46
9.500	1.04	0.00	0.517	OI				4.51
9.583	1.05	0.00	0.524	OI				4.56
9.667	1.06	0.00	0.531	OI				4.61
9.750	1.07	0.00	0.539	OI				4.67
9.833	1.08	0.00	0.546	OI				4.72

9.917	1.09	0.00	0.554	OI				4.78
10.000	1.10	0.00	0.561	OI				4.83
10.083	1.11	0.00	0.569	OI				4.89
10.167	1.12	0.00	0.577	OI				4.95
10.250	1.14	0.00	0.584	OI				5.00
10.333	1.15	0.00	0.592	OI				5.06
10.417	1.16	0.00	0.600	OI				5.12
10.500	1.17	0.00	0.608	OI				5.18
10.583	1.19	0.02	0.616	OI				5.24
10.667	1.20	0.12	0.624	OI				5.30
10.750	1.21	0.22	0.631	OI				5.35
10.833	1.23	0.30	0.638	OI				5.40
10.917	1.24	0.39	0.644	OI				5.45
11.000	1.26	0.46	0.650	OI				5.49
11.083	1.27	0.65	0.654	OI				5.53
11.167	1.29	0.82	0.658	OI				5.56
11.250	1.30	0.96	0.661	O				5.58
11.333	1.32	1.06	0.663	O				5.59
11.417	1.34	1.13	0.665	O				5.60
11.500	1.35	1.19	0.666	O				5.61
11.583	1.37	1.24	0.667	O				5.62
11.667	1.39	1.28	0.668	O				5.63
11.750	1.41	1.31	0.669	O				5.63
11.833	1.43	1.34	0.669	O				5.64
11.917	1.45	1.37	0.670	O				5.64
12.000	1.47	1.39	0.670	O				5.65
12.083	1.48	1.42	0.671	O				5.65
12.167	1.47	1.43	0.671	O				5.65
12.250	1.45	1.44	0.671	O				5.65
12.333	1.45	1.44	0.671	O				5.65
12.417	1.47	1.45	0.671	O				5.66
12.500	1.49	1.46	0.672	O				5.66
12.583	1.52	1.47	0.672	O				5.66
12.667	1.54	1.49	0.672	O				5.66
12.750	1.57	1.51	0.673	O				5.66
12.833	1.60	1.53	0.673	O				5.67
12.917	1.63	1.55	0.674	O				5.67
13.000	1.66	1.58	0.674	O				5.68
13.083	1.69	1.60	0.675	O				5.68
13.167	1.72	1.63	0.675	O				5.68
13.250	1.75	1.66	0.676	O				5.69
13.333	1.79	1.69	0.676	O				5.69
13.417	1.82	1.72	0.677	O				5.70
13.500	1.86	1.76	0.678	OI				5.71
13.583	1.90	1.79	0.679	OI				5.71
13.667	1.94	1.83	0.679	OI				5.72
13.750	1.99	1.87	0.680	O				5.72
13.833	2.03	1.91	0.681	O				5.73
13.917	2.08	1.95	0.682	O				5.74
14.000	2.13	2.00	0.683	O				5.74
14.083	2.19	2.04	0.684	O				5.75
14.167	2.25	2.09	0.685	O				5.76
14.250	2.31	2.14	0.686	O				5.77
14.333	2.38	2.20	0.687	O				5.78
14.417	2.45	2.26	0.688	O				5.79
14.500	2.52	2.32	0.690	O				5.80
14.583	2.60	2.39	0.691	O				5.81
14.667	2.69	2.46	0.693	O				5.82
14.750	2.78	2.54	0.694	OI				5.83
14.833	2.88	2.62	0.696	OI				5.84
14.917	2.99	2.71	0.698	OI				5.86
15.000	3.12	2.81	0.700	O				5.87
15.083	3.25	2.91	0.702	O				5.89
15.167	3.40	3.03	0.705	O				5.91
15.250	3.58	3.16	0.707	O				5.93
15.333	3.77	3.30	0.710	OI				5.95
15.417	3.94	3.46	0.714	OI				5.98
15.500	3.90	3.59	0.716	OI				6.00
15.583	3.76	3.66	0.718	OI				6.01

15.667	3.92	3.71	0.719	| O |	|	|	|	6.02
15.750	4.33	3.83	0.721	| O |	|	|	|	6.04
15.833	4.96	4.06	0.726	| OI |	|	|	|	6.08
15.917	5.96	4.45	0.735	| O I |	|	|	|	6.14
16.000	7.95	5.15	0.749	| O I |	|	|	|	6.25
16.083	13.37	6.70	0.782	| O| I |	|	|	|	6.50
16.167	25.27	7.86	0.865	| O |	|	I	|	7.19
16.250	29.52	9.68	0.993	| O |	|	| I	|	8.43
16.333	17.39	11.28	1.083	| O | I	|	|	|	9.76
16.417	8.83	11.49	1.095	|I O |	|	|	|	9.95
16.500	5.47	10.98	1.066	| I | O |	|	|	|	9.52
16.583	4.78	10.29	1.028	| I | O |	|	|	|	8.93
16.667	3.90	9.63	0.990	| I | O |	|	|	|	8.39
16.750	3.53	9.07	0.951	| I |O |	|	|	|	8.00
16.833	3.22	8.54	0.913	| I |O |	|	|	|	7.62
16.917	2.97	8.04	0.878	| I O |	|	|	|	7.30
17.000	2.76	7.56	0.844	| I O |	|	|	|	7.01
17.083	2.58	7.11	0.811	| I O|	|	|	|	6.75
17.167	2.42	6.66	0.781	| I O|	|	|	|	6.49
17.250	2.29	5.45	0.756	| I O |	|	|	|	6.30
17.333	2.17	4.55	0.737	| I O |	|	|	|	6.15
17.417	2.07	3.87	0.722	| I O |	|	|	|	6.04
17.500	1.97	3.35	0.711	| IO |	|	|	|	5.96
17.583	1.89	2.95	0.703	| IO |	|	|	|	5.90
17.667	1.81	2.64	0.697	|IO |	|	|	|	5.85
17.750	1.74	2.40	0.691	|IO |	|	|	|	5.81
17.833	1.68	2.20	0.687	|IO |	|	|	|	5.78
17.917	1.62	2.05	0.684	|IO |	|	|	|	5.75
18.000	1.56	1.92	0.681	|IO |	|	|	|	5.73
18.083	1.51	1.81	0.679	|O |	|	|	|	5.71
18.167	1.49	1.72	0.677	|O |	|	|	|	5.70
18.250	1.49	1.66	0.676	|O |	|	|	|	5.69
18.333	1.47	1.61	0.675	|O |	|	|	|	5.68
18.417	1.44	1.57	0.674	|O |	|	|	|	5.67
18.500	1.40	1.52	0.673	|O |	|	|	|	5.67
18.583	1.36	1.48	0.672	|O |	|	|	|	5.66
18.667	1.33	1.45	0.671	|O |	|	|	|	5.66
18.750	1.30	1.41	0.671	|O |	|	|	|	5.65
18.833	1.27	1.37	0.670	|O |	|	|	|	5.64
18.917	1.24	1.34	0.669	|O |	|	|	|	5.64
19.000	1.21	1.31	0.668	|O |	|	|	|	5.63
19.083	1.18	1.28	0.668	|O |	|	|	|	5.63
19.167	1.16	1.25	0.667	|O |	|	|	|	5.62
19.250	1.13	1.22	0.666	|O |	|	|	|	5.62
19.333	1.11	1.19	0.666	|O |	|	|	|	5.61
19.417	1.09	1.16	0.665	|O |	|	|	|	5.61
19.500	1.06	1.14	0.665	|O |	|	|	|	5.61
19.583	1.04	1.11	0.664	|O |	|	|	|	5.60
19.667	1.02	1.09	0.664	|O |	|	|	|	5.60
19.750	1.00	1.07	0.663	|O |	|	|	|	5.59
19.833	0.98	1.05	0.663	|O |	|	|	|	5.59
19.917	0.96	1.03	0.662	|O |	|	|	|	5.59
20.000	0.95	1.01	0.662	|O |	|	|	|	5.58
20.083	0.93	0.99	0.662	|O |	|	|	|	5.58
20.167	0.91	0.97	0.661	IO |	|	|	|	5.58
20.250	0.90	0.95	0.661	IO |	|	|	|	5.58
20.333	0.88	0.93	0.661	IO |	|	|	|	5.57
20.417	0.87	0.92	0.660	O |	|	|	|	5.57
20.500	0.85	0.90	0.660	O |	|	|	|	5.57
20.583	0.84	0.88	0.659	O |	|	|	|	5.56
20.667	0.82	0.87	0.659	O |	|	|	|	5.56
20.750	0.81	0.85	0.659	O |	|	|	|	5.56
20.833	0.80	0.84	0.659	O |	|	|	|	5.56
20.917	0.78	0.83	0.658	O |	|	|	|	5.56
21.000	0.77	0.81	0.658	O |	|	|	|	5.55
21.083	0.76	0.80	0.658	O |	|	|	|	5.55
21.167	0.75	0.79	0.657	O |	|	|	|	5.55
21.250	0.73	0.77	0.657	O |	|	|	|	5.55
21.333	0.72	0.76	0.657	O |	|	|	|	5.54

21.417	0.71	0.75	0.657	O					5.54
21.500	0.70	0.74	0.656	O					5.54
21.583	0.69	0.73	0.656	O					5.54
21.667	0.68	0.71	0.656	O					5.54
21.750	0.67	0.70	0.656	O					5.54
21.833	0.66	0.69	0.655	O					5.53
21.917	0.65	0.68	0.655	O					5.53
22.000	0.64	0.67	0.655	O					5.53
22.083	0.63	0.66	0.655	O					5.53
22.167	0.62	0.65	0.655	O					5.53
22.250	0.61	0.64	0.654	O					5.53
22.333	0.61	0.63	0.654	O					5.52
22.417	0.60	0.62	0.654	O					5.52
22.500	0.59	0.62	0.654	O					5.52
22.583	0.58	0.61	0.654	O					5.52
22.667	0.57	0.60	0.653	O					5.52
22.750	0.56	0.59	0.653	O					5.52
22.833	0.56	0.58	0.653	O					5.52
22.917	0.55	0.57	0.653	O					5.51
23.000	0.54	0.57	0.653	O					5.51
23.083	0.53	0.56	0.653	O					5.51
23.167	0.53	0.55	0.652	O					5.51
23.250	0.52	0.54	0.652	O					5.51
23.333	0.51	0.54	0.652	O					5.51
23.417	0.51	0.53	0.652	O					5.51
23.500	0.50	0.52	0.652	O					5.51
23.583	0.49	0.51	0.652	O					5.51
23.667	0.49	0.51	0.652	O					5.50
23.750	0.48	0.50	0.651	O					5.50
23.833	0.47	0.49	0.651	O					5.50
23.917	0.47	0.49	0.651	O					5.50
24.000	0.46	0.48	0.651	O					5.50
24.083	0.40	0.48	0.651	O					5.50
24.167	0.07	0.46	0.649	O					5.49
24.250	0.00	0.42	0.646	O					5.46
24.333	0.00	0.38	0.643	O					5.44
24.417	0.00	0.35	0.641	O					5.42
24.500	0.00	0.32	0.639	O					5.41
24.583	0.00	0.29	0.637	O					5.39
24.667	0.00	0.26	0.635	O					5.38
24.750	0.00	0.24	0.633	O					5.36
24.833	0.00	0.22	0.631	O					5.35
24.917	0.00	0.20	0.630	O					5.34
25.000	0.00	0.18	0.629	O					5.33
25.083	0.00	0.17	0.627	O					5.32
25.167	0.00	0.15	0.626	O					5.31
25.250	0.00	0.14	0.625	O					5.31
25.333	0.00	0.13	0.624	O					5.30
25.417	0.00	0.11	0.624	O					5.29
25.500	0.00	0.10	0.623	O					5.29
25.583	0.00	0.10	0.622	O					5.28
25.667	0.00	0.09	0.622	O					5.28
25.750	0.00	0.08	0.621	O					5.27
25.833	0.00	0.07	0.620	O					5.27
25.917	0.00	0.07	0.620	O					5.27
26.000	0.00	0.06	0.619	O					5.26
26.083	0.00	0.05	0.619	O					5.26
26.167	0.00	0.05	0.619	O					5.26
26.250	0.00	0.05	0.618	O					5.26
26.333	0.00	0.04	0.618	O					5.25
26.417	0.00	0.04	0.618	O					5.25
26.500	0.00	0.03	0.618	O					5.25
26.583	0.00	0.03	0.617	O					5.25
26.667	0.00	0.03	0.617	O					5.25
26.750	0.00	0.03	0.617	O					5.24
26.833	0.00	0.02	0.617	O					5.24
26.917	0.00	0.02	0.617	O					5.24
27.000	0.00	0.02	0.616	O					5.24
27.083	0.00	0.02	0.616	O					5.24

27.167	0.00	0.02	0.616	O	|	|	|	|	5.24
27.250	0.00	0.02	0.616	O	|	|	|	|	5.24
27.333	0.00	0.01	0.616	O	|	|	|	|	5.24
27.417	0.00	0.01	0.616	O	|	|	|	|	5.24
27.500	0.00	0.01	0.616	O	|	|	|	|	5.24
27.583	0.00	0.01	0.616	O	|	|	|	|	5.24
27.667	0.00	0.01	0.616	O	|	|	|	|	5.24
27.750	0.00	0.01	0.616	O	|	|	|	|	5.23
27.833	0.00	0.01	0.616	O	|	|	|	|	5.23
27.917	0.00	0.01	0.616	O	|	|	|	|	5.23
28.000	0.00	0.01	0.615	O	|	|	|	|	5.23
28.083	0.00	0.01	0.615	O	|	|	|	|	5.23
28.167	0.00	0.01	0.615	O	|	|	|	|	5.23
28.250	0.00	0.00	0.615	O	|	|	|	|	5.23
28.333	0.00	0.00	0.615	O	|	|	|	|	5.23
28.417	0.00	0.00	0.615	O	|	|	|	|	5.23
28.500	0.00	0.00	0.615	O	|	|	|	|	5.23
28.583	0.00	0.00	0.615	O	|	|	|	|	5.23
28.667	0.00	0.00	0.615	O	|	|	|	|	5.23
28.750	0.00	0.00	0.615	O	|	|	|	|	5.23
28.833	0.00	0.00	0.615	O	|	|	|	|	5.23
28.917	0.00	0.00	0.615	O	|	|	|	|	5.23
29.000	0.00	0.00	0.615	O	|	|	|	|	5.23
29.083	0.00	0.00	0.615	O	|	|	|	|	5.23
29.167	0.00	0.00	0.615	O	|	|	|	|	5.23
29.250	0.00	0.00	0.615	O	|	|	|	|	5.23
29.333	0.00	0.00	0.615	O	|	|	|	|	5.23
29.417	0.00	0.00	0.615	O	|	|	|	|	5.23
29.500	0.00	0.00	0.615	O	|	|	|	|	5.23
29.583	0.00	0.00	0.615	O	|	|	|	|	5.23
29.667	0.00	0.00	0.615	O	|	|	|	|	5.23
29.750	0.00	0.00	0.615	O	|	|	|	|	5.23

Remaining water in basin = 0.62 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 357
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 11.494 (CFS)
Total volume = 2.439 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.742	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	1.478	0.000	0.000	0.000

****

ATTACHMENT 5

Basin Routing
Calculations

Area A

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018
Study date: 08/15/22

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
2-YEAR, 24-HOUR STORM
BY: FA DATE: 08-15-22

Program License Serial Number 6320

********** HYDROGRAPH INFORMATION **********

From study/file name: DEVHYDA2.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 18.569 (CFS)
Total volume = 1.814 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++
Process from Point/Station 3.000 to Point/Station 6.000
**** RETARDING BASIN ROUTING ****
_____

Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))
Total outflow at this depth = 0.00(CFS)

```
CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.20(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
Calculated individual pipe flow  =     0.472(CFS)
Normal flow depth in pipe =    3.05(In.)
Flow top width inside pipe =    9.21(In.)
Critical Depth =    0.30(Ft.)
Calculated flow rate through pipe(s) =      0.472(CFS)

Total outflow at this depth =      0.47(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.650(Ft.)
Pipe friction loss =      0.741(Ft.)
Minor friction loss =      0.907(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      3.404(CFS)

Total outflow at this depth =      3.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
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The total friction loss through the pipe is      2.650(Ft.)
Pipe friction loss =      1.190(Ft.)
Minor friction loss =      1.457(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      4.314(CFS)

Total outflow at this depth =      4.31(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.650(Ft.)
Pipe friction loss =      1.640(Ft.)
Minor friction loss =      2.007(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.063(CFS)

Total outflow at this depth =      5.06(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      4.650(Ft.)
Pipe friction loss =      2.089(Ft.)
Minor friction loss =      2.557(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.714(CFS)

Total outflow at this depth =      5.71(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    9.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.650(Ft.)
Pipe friction loss =      2.538(Ft.)
Minor friction loss =      3.106(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.299(CFS)

Total outflow at this depth =      6.30(CFS)

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Total number of inflow hydrograph intervals = 292
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 4.20(Ft.)

Initial basin depth = 4.20 (Ft.)
Initial basin storage = 0.91 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.063	0.000	0.063	0.063
1.500	0.249	0.000	0.249	0.249
2.500	0.479	0.000	0.479	0.479
3.500	0.857	0.000	0.857	0.857
4.200	0.909	0.000	0.909	0.909
4.500	1.116	0.472	1.114	1.118
5.500	1.245	3.404	1.233	1.257
6.500	1.494	4.314	1.479	1.509
7.500	1.724	5.063	1.707	1.741
8.500	1.910	5.714	1.890	1.930
9.500	2.036	6.299	2.014	2.058

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 4.6 9.28 13.93 18.57	Depth (Ft.)
0.083	0.05	0.00	0.909	O | | | |	4.20
0.167	0.25	0.00	0.910	O | | | |	4.20
0.250	0.34	0.01	0.912	O | | | |	4.20
0.333	0.36	0.01	0.915	O | | | |	4.21
0.417	0.36	0.02	0.917	O | | | |	4.21
0.500	0.36	0.02	0.919	O | | | |	4.21
0.583	0.36	0.03	0.922	O | | | |	4.22
0.667	0.36	0.03	0.924	O | | | |	4.22
0.750	0.36	0.04	0.926	O | | | |	4.22
0.833	0.37	0.04	0.928	O | | | |	4.23
0.917	0.37	0.05	0.930	O | | | |	4.23
1.000	0.37	0.05	0.933	O | | | |	4.23
1.083	0.37	0.06	0.935	O | | | |	4.24
1.167	0.37	0.06	0.937	O | | | |	4.24
1.250	0.37	0.07	0.939	O | | | |	4.24
1.333	0.37	0.07	0.941	O | | | |	4.25

1.417	0.37	0.08	0.943	O				4.25
1.500	0.38	0.08	0.945	O				4.25
1.583	0.38	0.09	0.947	O				4.26
1.667	0.38	0.09	0.949	O				4.26
1.750	0.38	0.10	0.951	O				4.26
1.833	0.38	0.10	0.953	O				4.26
1.917	0.38	0.10	0.955	O				4.27
2.000	0.38	0.11	0.957	O				4.27
2.083	0.38	0.11	0.959	O				4.27
2.167	0.39	0.12	0.961	O				4.27
2.250	0.39	0.12	0.962	O				4.28
2.333	0.39	0.13	0.964	O				4.28
2.417	0.39	0.13	0.966	O				4.28
2.500	0.39	0.13	0.968	O				4.29
2.583	0.39	0.14	0.970	O				4.29
2.667	0.39	0.14	0.971	O				4.29
2.750	0.40	0.15	0.973	O				4.29
2.833	0.40	0.15	0.975	O				4.30
2.917	0.40	0.15	0.977	O				4.30
3.000	0.40	0.16	0.978	O				4.30
3.083	0.40	0.16	0.980	O				4.30
3.167	0.40	0.17	0.981	O				4.31
3.250	0.40	0.17	0.983	O				4.31
3.333	0.41	0.17	0.985	O				4.31
3.417	0.41	0.18	0.986	O				4.31
3.500	0.41	0.18	0.988	O				4.31
3.583	0.41	0.18	0.990	O				4.32
3.667	0.41	0.19	0.991	O				4.32
3.750	0.41	0.19	0.993	O				4.32
3.833	0.42	0.19	0.994	O				4.32
3.917	0.42	0.20	0.996	O				4.33
4.000	0.42	0.20	0.997	O				4.33
4.083	0.42	0.20	0.999	O				4.33
4.167	0.42	0.21	1.000	O				4.33
4.250	0.43	0.21	1.002	O				4.33
4.333	0.43	0.21	1.003	O				4.34
4.417	0.43	0.22	1.005	O				4.34
4.500	0.43	0.22	1.006	O				4.34
4.583	0.43	0.22	1.007	O				4.34
4.667	0.43	0.23	1.009	O				4.34
4.750	0.44	0.23	1.010	O				4.35
4.833	0.44	0.23	1.012	O				4.35
4.917	0.44	0.24	1.013	O				4.35
5.000	0.44	0.24	1.015	O				4.35
5.083	0.44	0.24	1.016	O				4.35
5.167	0.45	0.25	1.017	O				4.36
5.250	0.45	0.25	1.019	O				4.36
5.333	0.45	0.25	1.020	O				4.36
5.417	0.45	0.26	1.021	O				4.36
5.500	0.45	0.26	1.023	O				4.36

5.583	0.46	0.26	1.024	O				4.37
5.667	0.46	0.27	1.025	O				4.37
5.750	0.46	0.27	1.027	O				4.37
5.833	0.46	0.27	1.028	O				4.37
5.917	0.47	0.27	1.029	O				4.37
6.000	0.47	0.28	1.031	O				4.38
6.083	0.47	0.28	1.032	O				4.38
6.167	0.47	0.28	1.033	O				4.38
6.250	0.47	0.29	1.035	O				4.38
6.333	0.48	0.29	1.036	O				4.38
6.417	0.48	0.29	1.037	O				4.39
6.500	0.48	0.30	1.038	O				4.39
6.583	0.48	0.30	1.040	O				4.39
6.667	0.49	0.30	1.041	O				4.39
6.750	0.49	0.30	1.042	O				4.39
6.833	0.49	0.31	1.044	O				4.40
6.917	0.49	0.31	1.045	O				4.40
7.000	0.50	0.31	1.046	O				4.40
7.083	0.50	0.32	1.047	O				4.40
7.167	0.50	0.32	1.049	O				4.40
7.250	0.51	0.32	1.050	O				4.40
7.333	0.51	0.32	1.051	O				4.41
7.417	0.51	0.33	1.052	O				4.41
7.500	0.51	0.33	1.054	O				4.41
7.583	0.52	0.33	1.055	O				4.41
7.667	0.52	0.34	1.056	O				4.41
7.750	0.52	0.34	1.058	O				4.42
7.833	0.53	0.34	1.059	O				4.42
7.917	0.53	0.34	1.060	O				4.42
8.000	0.53	0.35	1.061	O				4.42
8.083	0.54	0.35	1.063	O				4.42
8.167	0.54	0.35	1.064	O				4.42
8.250	0.54	0.36	1.065	O				4.43
8.333	0.55	0.36	1.067	O				4.43
8.417	0.55	0.36	1.068	O				4.43
8.500	0.55	0.37	1.069	O				4.43
8.583	0.56	0.37	1.070	O				4.43
8.667	0.56	0.37	1.072	O				4.44
8.750	0.56	0.37	1.073	O				4.44
8.833	0.57	0.38	1.074	O				4.44
8.917	0.57	0.38	1.076	O				4.44
9.000	0.58	0.38	1.077	O				4.44
9.083	0.58	0.39	1.078	OI				4.45
9.167	0.59	0.39	1.080	OI				4.45
9.250	0.59	0.39	1.081	OI				4.45
9.333	0.59	0.40	1.082	OI				4.45
9.417	0.60	0.40	1.084	OI				4.45
9.500	0.60	0.40	1.085	OI				4.46
9.583	0.61	0.40	1.087	OI				4.46
9.667	0.61	0.41	1.088	OI				4.46

9.750	0.62	0.41	1.089	OI				4.46
9.833	0.62	0.41	1.091	OI				4.46
9.917	0.63	0.42	1.092	OI				4.47
10.000	0.63	0.42	1.094	OI				4.47
10.083	0.64	0.42	1.095	OI				4.47
10.167	0.64	0.43	1.097	OI				4.47
10.250	0.65	0.43	1.098	OI				4.47
10.333	0.65	0.43	1.100	OI				4.48
10.417	0.66	0.44	1.101	OI				4.48
10.500	0.66	0.44	1.103	OI				4.48
10.583	0.67	0.44	1.104	OI				4.48
10.667	0.68	0.45	1.106	OI				4.49
10.750	0.68	0.45	1.107	OI				4.49
10.833	0.69	0.46	1.109	OI				4.49
10.917	0.69	0.46	1.110	OI				4.49
11.000	0.70	0.46	1.112	OI				4.49
11.083	0.71	0.47	1.114	OI				4.50
11.167	0.72	0.47	1.115	OI				4.50
11.250	0.72	0.50	1.117	OI				4.51
11.333	0.73	0.53	1.119	OI				4.52
11.417	0.74	0.56	1.120	OI				4.53
11.500	0.75	0.59	1.121	|O				4.54
11.583	0.75	0.61	1.122	|O				4.55
11.667	0.76	0.63	1.123	|O				4.55
11.750	0.77	0.65	1.124	|O				4.56
11.833	0.78	0.67	1.125	|O				4.57
11.917	0.79	0.69	1.125	|O				4.57
12.000	0.80	0.70	1.126	|O				4.58
12.083	0.84	0.72	1.127	|O				4.58
12.167	0.98	0.75	1.128	|O				4.59
12.250	1.05	0.79	1.130	|O				4.61
12.333	1.07	0.83	1.132	|O				4.62
12.417	1.08	0.86	1.133	|O				4.63
12.500	1.10	0.89	1.135	|O				4.64
12.583	1.11	0.92	1.136	|O				4.65
12.667	1.12	0.95	1.137	|O				4.66
12.750	1.13	0.98	1.138	|O				4.67
12.833	1.15	1.00	1.139	|O				4.68
12.917	1.16	1.02	1.140	|OI				4.69
13.000	1.18	1.04	1.141	|OI				4.70
13.083	1.19	1.06	1.142	|OI				4.70
13.167	1.21	1.08	1.143	|OI				4.71
13.250	1.22	1.10	1.144	|OI				4.72
13.333	1.24	1.12	1.145	|OI				4.72
13.417	1.26	1.14	1.145	|OI				4.73
13.500	1.28	1.16	1.146	|OI				4.73
13.583	1.30	1.18	1.147	| O				4.74
13.667	1.32	1.20	1.148	| O				4.75
13.750	1.34	1.22	1.149	| O				4.75
13.833	1.37	1.24	1.150	| O				4.76

13.917	1.39	1.26	1.151	O				4.77
14.000	1.42	1.28	1.151	O				4.77
14.083	1.44	1.30	1.152	O				4.78
14.167	1.47	1.32	1.153	O				4.79
14.250	1.50	1.35	1.154	O				4.80
14.333	1.54	1.37	1.156	O				4.81
14.417	1.57	1.40	1.157	O				4.82
14.500	1.61	1.43	1.158	O				4.83
14.583	1.65	1.46	1.159	O				4.84
14.667	1.70	1.49	1.161	O				4.85
14.750	1.74	1.52	1.162	O				4.86
14.833	1.80	1.56	1.164	OI				4.87
14.917	1.85	1.59	1.165	OI				4.88
15.000	1.92	1.64	1.167	OI				4.90
15.083	1.98	1.68	1.169	OI				4.91
15.167	2.07	1.73	1.171	OI				4.93
15.250	2.15	1.79	1.174	O				4.95
15.333	2.26	1.85	1.176	O				4.97
15.417	2.30	1.91	1.179	O				4.99
15.500	2.13	1.95	1.181	O				5.01
15.583	2.14	1.98	1.182	O				5.01
15.667	2.35	2.02	1.184	OI				5.03
15.750	2.60	2.09	1.187	OI				5.05
15.833	3.02	2.19	1.192	O I				5.09
15.917	3.59	2.35	1.199	O I				5.14
16.000	4.88	2.63	1.211	O I				5.23
16.083	9.32	3.27	1.239	O	I			5.46
16.167	18.57	3.65	1.312	O			I	5.77
16.250	10.27	3.91	1.385	O	I			6.06
16.333	3.99	3.99	1.407	O				6.15
16.417	2.69	3.98	1.402	I O				6.13
16.500	2.40	3.94	1.392	I O				6.09
16.583	2.27	3.90	1.382	I O				6.05
16.667	2.08	3.86	1.370	I O				6.00
16.750	1.93	3.81	1.357	I O				5.95
16.833	1.81	3.77	1.344	I O				5.90
16.917	1.70	3.72	1.330	I O				5.84
17.000	1.62	3.66	1.316	I O				5.79
17.083	1.54	3.61	1.302	I O				5.73
17.167	1.48	3.56	1.288	I O				5.67
17.250	1.42	3.51	1.273	I O				5.61
17.333	1.37	3.46	1.259	I O				5.56
17.417	1.32	3.40	1.245	I O				5.50
17.500	1.28	3.09	1.231	I O				5.39
17.583	1.25	2.83	1.220	I O				5.30
17.667	1.21	2.60	1.209	I O				5.22
17.750	1.18	2.39	1.201	I O				5.16
17.833	1.15	2.21	1.193	I O				5.09
17.917	1.12	2.06	1.186	I O				5.04
18.000	1.10	1.92	1.180	I O				4.99

18.083	1.04	1.80	1.174	|I O	|	|	|	4.95
18.167	0.89	1.68	1.169	|IO	|	|	|	4.91
18.250	0.81	1.56	1.164	|IO	|	|	|	4.87
18.333	0.78	1.45	1.159	|IO	|	|	|	4.83
18.417	0.76	1.35	1.155	|IO	|	|	|	4.80
18.500	0.75	1.26	1.151	|IO	|	|	|	4.77
18.583	0.73	1.19	1.147	|IO	|	|	|	4.74
18.667	0.72	1.12	1.144	|O	|	|	|	4.72
18.750	0.70	1.06	1.142	|O	|	|	|	4.70
18.833	0.69	1.01	1.140	|O	|	|	|	4.68
18.917	0.68	0.96	1.137	|O	|	|	|	4.67
19.000	0.67	0.92	1.136	|O	|	|	|	4.65
19.083	0.65	0.88	1.134	|O	|	|	|	4.64
19.167	0.64	0.85	1.132	|O	|	|	|	4.63
19.250	0.63	0.82	1.131	|O	|	|	|	4.62
19.333	0.62	0.79	1.130	|O	|	|	|	4.61
19.417	0.61	0.76	1.129	|O	|	|	|	4.60
19.500	0.60	0.74	1.128	|O	|	|	|	4.59
19.583	0.59	0.72	1.127	|O	|	|	|	4.58
19.667	0.59	0.70	1.126	|O	|	|	|	4.58
19.750	0.58	0.68	1.125	IO	|	|	|	4.57
19.833	0.57	0.67	1.125	IO	|	|	|	4.57
19.917	0.56	0.65	1.124	IO	|	|	|	4.56
20.000	0.55	0.64	1.123	IO	|	|	|	4.56
20.083	0.55	0.63	1.123	IO	|	|	|	4.55
20.167	0.54	0.61	1.122	IO	|	|	|	4.55
20.250	0.53	0.60	1.122	IO	|	|	|	4.54
20.333	0.53	0.59	1.121	IO	|	|	|	4.54
20.417	0.52	0.58	1.121	IO	|	|	|	4.54
20.500	0.52	0.57	1.120	O	|	|	|	4.53
20.583	0.51	0.56	1.120	O	|	|	|	4.53
20.667	0.50	0.56	1.120	O	|	|	|	4.53
20.750	0.50	0.55	1.119	O	|	|	|	4.53
20.833	0.49	0.54	1.119	O	|	|	|	4.52
20.917	0.49	0.53	1.119	O	|	|	|	4.52
21.000	0.48	0.53	1.118	O	|	|	|	4.52
21.083	0.48	0.52	1.118	O	|	|	|	4.52
21.167	0.47	0.51	1.118	O	|	|	|	4.51
21.250	0.47	0.51	1.118	O	|	|	|	4.51
21.333	0.46	0.50	1.117	O	|	|	|	4.51
21.417	0.46	0.50	1.117	O	|	|	|	4.51
21.500	0.45	0.49	1.117	O	|	|	|	4.51
21.583	0.45	0.48	1.117	O	|	|	|	4.50
21.667	0.45	0.48	1.116	O	|	|	|	4.50
21.750	0.44	0.47	1.116	O	|	|	|	4.50
21.833	0.44	0.47	1.116	O	|	|	|	4.50
21.917	0.43	0.47	1.116	O	|	|	|	4.50
22.000	0.43	0.47	1.115	O	|	|	|	4.50
22.083	0.43	0.47	1.115	O	|	|	|	4.50
22.167	0.42	0.47	1.115	O	|	|	|	4.50

22.250	0.42	0.47	1.114	O				4.50
22.333	0.42	0.47	1.114	O				4.50
22.417	0.41	0.47	1.114	O				4.50
22.500	0.41	0.47	1.113	O				4.50
22.583	0.41	0.47	1.113	O				4.50
22.667	0.40	0.46	1.113	O				4.50
22.750	0.40	0.46	1.112	O				4.49
22.833	0.40	0.46	1.112	O				4.49
22.917	0.39	0.46	1.111	O				4.49
23.000	0.39	0.46	1.111	O				4.49
23.083	0.39	0.46	1.110	O				4.49
23.167	0.39	0.46	1.110	O				4.49
23.250	0.38	0.46	1.109	O				4.49
23.333	0.38	0.46	1.109	O				4.49
23.417	0.38	0.45	1.108	O				4.49
23.500	0.38	0.45	1.108	O				4.49
23.583	0.37	0.45	1.107	O				4.49
23.667	0.37	0.45	1.107	O				4.49
23.750	0.37	0.45	1.106	O				4.49
23.833	0.37	0.45	1.106	O				4.48
23.917	0.36	0.45	1.105	O				4.48
24.000	0.36	0.45	1.104	O				4.48
24.083	0.31	0.44	1.104	O				4.48
24.167	0.11	0.44	1.102	O				4.48
24.250	0.01	0.43	1.099	O				4.48
24.333	0.00	0.43	1.097	O				4.47
24.417	0.00	0.42	1.094	O				4.47
24.500	0.00	0.41	1.091	O				4.46
24.583	0.00	0.41	1.088	O				4.46
24.667	0.00	0.40	1.085	O				4.46
24.750	0.00	0.40	1.082	O				4.45
24.833	0.00	0.39	1.080	O				4.45
24.917	0.00	0.38	1.077	O				4.44
25.000	0.00	0.38	1.074	O				4.44
25.083	0.00	0.37	1.072	O				4.44
25.167	0.00	0.37	1.069	O				4.43
25.250	0.00	0.36	1.067	O				4.43
25.333	0.00	0.35	1.064	O				4.43
25.417	0.00	0.35	1.062	O				4.42
25.500	0.00	0.34	1.060	O				4.42
25.583	0.00	0.34	1.057	O				4.41
25.667	0.00	0.33	1.055	O				4.41
25.750	0.00	0.33	1.053	O				4.41
25.833	0.00	0.32	1.050	O				4.40
25.917	0.00	0.32	1.048	O				4.40
26.000	0.00	0.31	1.046	O				4.40
26.083	0.00	0.31	1.044	O				4.40
26.167	0.00	0.30	1.042	O				4.39
26.250	0.00	0.30	1.040	O				4.39
26.333	0.00	0.29	1.038	O				4.39

26.417	0.00	0.29	1.036	O				4.38
26.500	0.00	0.28	1.034	O				4.38
26.583	0.00	0.28	1.032	O				4.38
26.667	0.00	0.28	1.030	O				4.38
26.750	0.00	0.27	1.028	O				4.37
26.833	0.00	0.27	1.026	O				4.37
26.917	0.00	0.26	1.024	O				4.37
27.000	0.00	0.26	1.022	O				4.36
27.083	0.00	0.25	1.021	O				4.36
27.167	0.00	0.25	1.019	O				4.36
27.250	0.00	0.25	1.017	O				4.36
27.333	0.00	0.24	1.016	O				4.35
27.417	0.00	0.24	1.014	O				4.35
27.500	0.00	0.24	1.012	O				4.35
27.583	0.00	0.23	1.011	O				4.35
27.667	0.00	0.23	1.009	O				4.35
27.750	0.00	0.22	1.008	O				4.34
27.833	0.00	0.22	1.006	O				4.34
27.917	0.00	0.22	1.004	O				4.34
28.000	0.00	0.21	1.003	O				4.34
28.083	0.00	0.21	1.002	O				4.33
28.167	0.00	0.21	1.000	O				4.33
28.250	0.00	0.20	0.999	O				4.33
28.333	0.00	0.20	0.997	O				4.33
28.417	0.00	0.20	0.996	O				4.33
28.500	0.00	0.20	0.995	O				4.32
28.583	0.00	0.19	0.993	O				4.32
28.667	0.00	0.19	0.992	O				4.32
28.750	0.00	0.19	0.991	O				4.32
28.833	0.00	0.18	0.989	O				4.32
28.917	0.00	0.18	0.988	O				4.31
29.000	0.00	0.18	0.987	O				4.31
29.083	0.00	0.17	0.986	O				4.31
29.167	0.00	0.17	0.984	O				4.31
29.250	0.00	0.17	0.983	O				4.31
29.333	0.00	0.17	0.982	O				4.31
29.417	0.00	0.16	0.981	O				4.30
29.500	0.00	0.16	0.980	O				4.30
29.583	0.00	0.16	0.979	O				4.30
29.667	0.00	0.16	0.978	O				4.30
29.750	0.00	0.15	0.977	O				4.30
29.833	0.00	0.15	0.976	O				4.30
29.917	0.00	0.15	0.975	O				4.29
30.000	0.00	0.15	0.973	O				4.29
30.083	0.00	0.14	0.972	O				4.29
30.167	0.00	0.14	0.971	O				4.29
30.250	0.00	0.14	0.971	O				4.29
30.333	0.00	0.14	0.970	O				4.29
30.417	0.00	0.14	0.969	O				4.29
30.500	0.00	0.13	0.968	O				4.29

30.583	0.00	0.13	0.967	O					4.28
30.667	0.00	0.13	0.966	O					4.28
30.750	0.00	0.13	0.965	O					4.28
30.833	0.00	0.13	0.964	O					4.28
30.917	0.00	0.12	0.963	O					4.28
31.000	0.00	0.12	0.962	O					4.28
31.083	0.00	0.12	0.962	O					4.28
31.167	0.00	0.12	0.961	O					4.28
31.250	0.00	0.12	0.960	O					4.27
31.333	0.00	0.11	0.959	O					4.27
31.417	0.00	0.11	0.958	O					4.27
31.500	0.00	0.11	0.958	O					4.27
31.583	0.00	0.11	0.957	O					4.27
31.667	0.00	0.11	0.956	O					4.27
31.750	0.00	0.11	0.955	O					4.27
31.833	0.00	0.10	0.955	O					4.27
31.917	0.00	0.10	0.954	O					4.27
32.000	0.00	0.10	0.953	O					4.26
32.083	0.00	0.10	0.953	O					4.26
32.167	0.00	0.10	0.952	O					4.26
32.250	0.00	0.10	0.951	O					4.26
32.333	0.00	0.09	0.951	O					4.26
32.417	0.00	0.09	0.950	O					4.26
32.500	0.00	0.09	0.949	O					4.26
32.583	0.00	0.09	0.949	O					4.26
32.667	0.00	0.09	0.948	O					4.26
32.750	0.00	0.09	0.947	O					4.26
32.833	0.00	0.09	0.947	O					4.25
32.917	0.00	0.08	0.946	O					4.25
33.000	0.00	0.08	0.946	O					4.25
33.083	0.00	0.08	0.945	O					4.25
33.167	0.00	0.08	0.945	O					4.25
33.250	0.00	0.08	0.944	O					4.25
33.333	0.00	0.08	0.943	O					4.25
33.417	0.00	0.08	0.943	O					4.25
33.500	0.00	0.08	0.942	O					4.25
33.583	0.00	0.07	0.942	O					4.25
33.667	0.00	0.07	0.941	O					4.25
33.750	0.00	0.07	0.941	O					4.25
33.833	0.00	0.07	0.940	O					4.25
33.917	0.00	0.07	0.940	O					4.24
34.000	0.00	0.07	0.939	O					4.24
34.083	0.00	0.07	0.939	O					4.24
34.167	0.00	0.07	0.938	O					4.24
34.250	0.00	0.07	0.938	O					4.24
34.333	0.00	0.06	0.938	O					4.24
34.417	0.00	0.06	0.937	O					4.24
34.500	0.00	0.06	0.937	O					4.24
34.583	0.00	0.06	0.936	O					4.24
34.667	0.00	0.06	0.936	O					4.24

34.750	0.00	0.06	0.935	O					4.24
34.833	0.00	0.06	0.935	O					4.24
34.917	0.00	0.06	0.935	O					4.24
35.000	0.00	0.06	0.934	O					4.24
35.083	0.00	0.06	0.934	O					4.24
35.167	0.00	0.06	0.933	O					4.24
35.250	0.00	0.05	0.933	O					4.23
35.333	0.00	0.05	0.933	O					4.23
35.417	0.00	0.05	0.932	O					4.23
35.500	0.00	0.05	0.932	O					4.23
35.583	0.00	0.05	0.932	O					4.23
35.667	0.00	0.05	0.931	O					4.23
35.750	0.00	0.05	0.931	O					4.23
35.833	0.00	0.05	0.930	O					4.23
35.917	0.00	0.05	0.930	O					4.23
36.000	0.00	0.05	0.930	O					4.23
36.083	0.00	0.05	0.929	O					4.23
36.167	0.00	0.05	0.929	O					4.23
36.250	0.00	0.05	0.929	O					4.23
36.333	0.00	0.04	0.929	O					4.23
36.417	0.00	0.04	0.928	O					4.23
36.500	0.00	0.04	0.928	O					4.23
36.583	0.00	0.04	0.928	O					4.23
36.667	0.00	0.04	0.927	O					4.23
36.750	0.00	0.04	0.927	O					4.23
36.833	0.00	0.04	0.927	O					4.23
36.917	0.00	0.04	0.927	O					4.23
37.000	0.00	0.04	0.926	O					4.22
37.083	0.00	0.04	0.926	O					4.22
37.167	0.00	0.04	0.926	O					4.22
37.250	0.00	0.04	0.925	O					4.22
37.333	0.00	0.04	0.925	O					4.22
37.417	0.00	0.04	0.925	O					4.22
37.500	0.00	0.04	0.925	O					4.22
37.583	0.00	0.04	0.924	O					4.22
37.667	0.00	0.03	0.924	O					4.22
37.750	0.00	0.03	0.924	O					4.22
37.833	0.00	0.03	0.924	O					4.22
37.917	0.00	0.03	0.924	O					4.22
38.000	0.00	0.03	0.923	O					4.22
38.083	0.00	0.03	0.923	O					4.22
38.167	0.00	0.03	0.923	O					4.22
38.250	0.00	0.03	0.923	O					4.22
38.333	0.00	0.03	0.922	O					4.22
38.417	0.00	0.03	0.922	O					4.22
38.500	0.00	0.03	0.922	O					4.22
38.583	0.00	0.03	0.922	O					4.22
38.667	0.00	0.03	0.922	O					4.22
38.750	0.00	0.03	0.921	O					4.22
38.833	0.00	0.03	0.921	O					4.22

38.917	0.00	0.03	0.921	O				4.22
39.000	0.00	0.03	0.921	O				4.22
39.083	0.00	0.03	0.921	O				4.22
39.167	0.00	0.03	0.920	O				4.22
39.250	0.00	0.03	0.920	O				4.22
39.333	0.00	0.03	0.920	O				4.22
39.417	0.00	0.02	0.920	O				4.22
39.500	0.00	0.02	0.920	O				4.22
39.583	0.00	0.02	0.920	O				4.22
39.667	0.00	0.02	0.919	O				4.22
39.750	0.00	0.02	0.919	O				4.21
39.833	0.00	0.02	0.919	O				4.21
39.917	0.00	0.02	0.919	O				4.21
40.000	0.00	0.02	0.919	O				4.21
40.083	0.00	0.02	0.919	O				4.21
40.167	0.00	0.02	0.918	O				4.21
40.250	0.00	0.02	0.918	O				4.21
40.333	0.00	0.02	0.918	O				4.21
40.417	0.00	0.02	0.918	O				4.21
40.500	0.00	0.02	0.918	O				4.21
40.583	0.00	0.02	0.918	O				4.21
40.667	0.00	0.02	0.918	O				4.21
40.750	0.00	0.02	0.918	O				4.21
40.833	0.00	0.02	0.917	O				4.21
40.917	0.00	0.02	0.917	O				4.21
41.000	0.00	0.02	0.917	O				4.21
41.083	0.00	0.02	0.917	O				4.21
41.167	0.00	0.02	0.917	O				4.21
41.250	0.00	0.02	0.917	O				4.21
41.333	0.00	0.02	0.917	O				4.21
41.417	0.00	0.02	0.917	O				4.21
41.500	0.00	0.02	0.916	O				4.21
41.583	0.00	0.02	0.916	O				4.21
41.667	0.00	0.02	0.916	O				4.21
41.750	0.00	0.02	0.916	O				4.21
41.833	0.00	0.02	0.916	O				4.21
41.917	0.00	0.02	0.916	O				4.21
42.000	0.00	0.02	0.916	O				4.21
42.083	0.00	0.02	0.916	O				4.21
42.167	0.00	0.01	0.916	O				4.21
42.250	0.00	0.01	0.915	O				4.21
42.333	0.00	0.01	0.915	O				4.21
42.417	0.00	0.01	0.915	O				4.21
42.500	0.00	0.01	0.915	O				4.21
42.583	0.00	0.01	0.915	O				4.21
42.667	0.00	0.01	0.915	O				4.21
42.750	0.00	0.01	0.915	O				4.21
42.833	0.00	0.01	0.915	O				4.21
42.917	0.00	0.01	0.915	O				4.21
43.000	0.00	0.01	0.915	O				4.21

43.083	0.00	0.01	0.914	O				4.21
43.167	0.00	0.01	0.914	O				4.21
43.250	0.00	0.01	0.914	O				4.21
43.333	0.00	0.01	0.914	O				4.21
43.417	0.00	0.01	0.914	O				4.21
43.500	0.00	0.01	0.914	O				4.21
43.583	0.00	0.01	0.914	O				4.21
43.667	0.00	0.01	0.914	O				4.21
43.750	0.00	0.01	0.914	O				4.21
43.833	0.00	0.01	0.914	O				4.21
43.917	0.00	0.01	0.914	O				4.21
44.000	0.00	0.01	0.914	O				4.21
44.083	0.00	0.01	0.914	O				4.21
44.167	0.00	0.01	0.913	O				4.21
44.250	0.00	0.01	0.913	O				4.21
44.333	0.00	0.01	0.913	O				4.21
44.417	0.00	0.01	0.913	O				4.21
44.500	0.00	0.01	0.913	O				4.21
44.583	0.00	0.01	0.913	O				4.21
44.667	0.00	0.01	0.913	O				4.21
44.750	0.00	0.01	0.913	O				4.21
44.833	0.00	0.01	0.913	O				4.21
44.917	0.00	0.01	0.913	O				4.21
45.000	0.00	0.01	0.913	O				4.21
45.083	0.00	0.01	0.913	O				4.21
45.167	0.00	0.01	0.913	O				4.21
45.250	0.00	0.01	0.913	O				4.21
45.333	0.00	0.01	0.913	O				4.21
45.417	0.00	0.01	0.913	O				4.21
45.500	0.00	0.01	0.912	O				4.21
45.583	0.00	0.01	0.912	O				4.20
45.667	0.00	0.01	0.912	O				4.20
45.750	0.00	0.01	0.912	O				4.20
45.833	0.00	0.01	0.912	O				4.20
45.917	0.00	0.01	0.912	O				4.20
46.000	0.00	0.01	0.912	O				4.20
46.083	0.00	0.01	0.912	O				4.20
46.167	0.00	0.01	0.912	O				4.20
46.250	0.00	0.01	0.912	O				4.20
46.333	0.00	0.01	0.912	O				4.20
46.417	0.00	0.01	0.912	O				4.20
46.500	0.00	0.01	0.912	O				4.20
46.583	0.00	0.01	0.912	O				4.20
46.667	0.00	0.01	0.912	O				4.20
46.750	0.00	0.01	0.912	O				4.20
46.833	0.00	0.01	0.912	O				4.20
46.917	0.00	0.01	0.912	O				4.20
47.000	0.00	0.01	0.912	O				4.20
47.083	0.00	0.01	0.912	O				4.20
47.167	0.00	0.01	0.912	O				4.20

47.250	0.00	0.01	0.911	O				4.20
47.333	0.00	0.01	0.911	O				4.20
47.417	0.00	0.01	0.911	O				4.20
47.500	0.00	0.01	0.911	O				4.20
47.583	0.00	0.01	0.911	O				4.20
47.667	0.00	0.01	0.911	O				4.20
47.750	0.00	0.01	0.911	O				4.20
47.833	0.00	0.01	0.911	O				4.20
47.917	0.00	0.01	0.911	O				4.20
48.000	0.00	0.00	0.911	O				4.20
48.083	0.00	0.00	0.911	O				4.20
48.167	0.00	0.00	0.911	O				4.20
48.250	0.00	0.00	0.911	O				4.20
48.333	0.00	0.00	0.911	O				4.20
48.417	0.00	0.00	0.911	O				4.20
48.500	0.00	0.00	0.911	O				4.20
48.583	0.00	0.00	0.911	O				4.20
48.667	0.00	0.00	0.911	O				4.20
48.750	0.00	0.00	0.911	O				4.20
48.833	0.00	0.00	0.911	O				4.20
48.917	0.00	0.00	0.911	O				4.20
49.000	0.00	0.00	0.911	O				4.20
49.083	0.00	0.00	0.911	O				4.20
49.167	0.00	0.00	0.911	O				4.20
49.250	0.00	0.00	0.911	O				4.20
49.333	0.00	0.00	0.911	O				4.20
49.417	0.00	0.00	0.911	O				4.20
49.500	0.00	0.00	0.911	O				4.20
49.583	0.00	0.00	0.911	O				4.20
49.667	0.00	0.00	0.911	O				4.20
49.750	0.00	0.00	0.911	O				4.20
49.833	0.00	0.00	0.911	O				4.20
49.917	0.00	0.00	0.911	O				4.20
50.000	0.00	0.00	0.910	O				4.20
50.083	0.00	0.00	0.910	O				4.20
50.167	0.00	0.00	0.910	O				4.20
50.250	0.00	0.00	0.910	O				4.20
50.333	0.00	0.00	0.910	O				4.20
50.417	0.00	0.00	0.910	O				4.20
50.500	0.00	0.00	0.910	O				4.20
50.583	0.00	0.00	0.910	O				4.20
50.667	0.00	0.00	0.910	O				4.20
50.750	0.00	0.00	0.910	O				4.20
50.833	0.00	0.00	0.910	O				4.20
50.917	0.00	0.00	0.910	O				4.20
51.000	0.00	0.00	0.910	O				4.20
51.083	0.00	0.00	0.910	O				4.20
51.167	0.00	0.00	0.910	O				4.20
51.250	0.00	0.00	0.910	O				4.20
51.333	0.00	0.00	0.910	O				4.20

51.417	0.00	0.00	0.910	O	|	|	|	4.20
51.500	0.00	0.00	0.910	O	|	|	|	4.20
51.583	0.00	0.00	0.910	O	|	|	|	4.20
51.667	0.00	0.00	0.910	O	|	|	|	4.20
51.750	0.00	0.00	0.910	O	|	|	|	4.20
51.833	0.00	0.00	0.910	O	|	|	|	4.20
51.917	0.00	0.00	0.910	O	|	|	|	4.20
52.000	0.00	0.00	0.910	O	|	|	|	4.20
52.083	0.00	0.00	0.910	O	|	|	|	4.20
52.167	0.00	0.00	0.910	O	|	|	|	4.20
52.250	0.00	0.00	0.910	O	|	|	|	4.20
52.333	0.00	0.00	0.910	O	|	|	|	4.20
52.417	0.00	0.00	0.910	O	|	|	|	4.20
52.500	0.00	0.00	0.910	O	|	|	|	4.20
52.583	0.00	0.00	0.910	O	|	|	|	4.20
52.667	0.00	0.00	0.910	O	|	|	|	4.20
52.750	0.00	0.00	0.910	O	|	|	|	4.20
52.833	0.00	0.00	0.910	O	|	|	|	4.20
52.917	0.00	0.00	0.910	O	|	|	|	4.20
53.000	0.00	0.00	0.910	O	|	|	|	4.20
53.083	0.00	0.00	0.910	O	|	|	|	4.20
53.167	0.00	0.00	0.910	O	|	|	|	4.20
53.250	0.00	0.00	0.910	O	|	|	|	4.20
53.333	0.00	0.00	0.910	O	|	|	|	4.20
53.417	0.00	0.00	0.910	O	|	|	|	4.20
53.500	0.00	0.00	0.910	O	|	|	|	4.20
53.583	0.00	0.00	0.910	O	|	|	|	4.20
53.667	0.00	0.00	0.910	O	|	|	|	4.20
53.750	0.00	0.00	0.910	O	|	|	|	4.20
53.833	0.00	0.00	0.910	O	|	|	|	4.20
53.917	0.00	0.00	0.910	O	|	|	|	4.20
54.000	0.00	0.00	0.910	O	|	|	|	4.20
54.083	0.00	0.00	0.910	O	|	|	|	4.20
54.167	0.00	0.00	0.910	O	|	|	|	4.20
54.250	0.00	0.00	0.910	O	|	|	|	4.20
54.333	0.00	0.00	0.910	O	|	|	|	4.20
54.417	0.00	0.00	0.910	O	|	|	|	4.20
54.500	0.00	0.00	0.910	O	|	|	|	4.20
54.583	0.00	0.00	0.910	O	|	|	|	4.20
54.667	0.00	0.00	0.910	O	|	|	|	4.20
54.750	0.00	0.00	0.910	O	|	|	|	4.20
54.833	0.00	0.00	0.910	O	|	|	|	4.20
54.917	0.00	0.00	0.910	O	|	|	|	4.20
55.000	0.00	0.00	0.910	O	|	|	|	4.20
55.083	0.00	0.00	0.910	O	|	|	|	4.20
55.167	0.00	0.00	0.910	O	|	|	|	4.20
55.250	0.00	0.00	0.910	O	|	|	|	4.20
55.333	0.00	0.00	0.910	O	|	|	|	4.20
55.417	0.00	0.00	0.910	O	|	|	|	4.20
55.500	0.00	0.00	0.910	O	|	|	|	4.20

55.583	0.00	0.00	0.910	O	|	|	|	|	4.20
55.667	0.00	0.00	0.910	O	|	|	|	|	4.20
55.750	0.00	0.00	0.910	O	|	|	|	|	4.20
55.833	0.00	0.00	0.909	O	|	|	|	|	4.20
55.917	0.00	0.00	0.909	O	|	|	|	|	4.20
56.000	0.00	0.00	0.909	O	|	|	|	|	4.20
56.083	0.00	0.00	0.909	O	|	|	|	|	4.20
56.167	0.00	0.00	0.909	O	|	|	|	|	4.20
56.250	0.00	0.00	0.909	O	|	|	|	|	4.20
56.333	0.00	0.00	0.909	O	|	|	|	|	4.20
56.417	0.00	0.00	0.909	O	|	|	|	|	4.20
56.500	0.00	0.00	0.909	O	|	|	|	|	4.20

**********HYDROGRAPH DATA**********

Number of intervals = 678
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 3.995 (CFS)
Total volume = 1.813 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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FLOOD HYDROGRAPH ROUTING PROGRAM

Study date: 08/15/22

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
10-YEAR, 24-HOUR STORM
BY: FA DATE: 08-15-22

Program License Serial Number 6320

********** HYDROGRAPH INFORMATION **********

From study/file name: DEVHYDA10.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 27.773 (CFS)
Total volume = 3.008 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 3.000 to Point/Station 6.000
**** RETARDING BASIN ROUTING ****
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Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))
Total outflow at this depth = 0.00(CFS)

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CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.20(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
Calculated individual pipe flow  =     0.472(CFS)
Normal flow depth in pipe =    3.05(In.)
Flow top width inside pipe =    9.21(In.)
Critical Depth =    0.30(Ft.)
Calculated flow rate through pipe(s) =      0.472(CFS)

Total outflow at this depth =      0.47(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.650(Ft.)
Pipe friction loss =      0.741(Ft.)
Minor friction loss =      0.907(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      3.404(CFS)

Total outflow at this depth =      3.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
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The total friction loss through the pipe is      2.650(Ft.)
Pipe friction loss =      1.190(Ft.)
Minor friction loss =      1.457(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      4.314(CFS)

Total outflow at this depth =      4.31(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.650(Ft.)
Pipe friction loss =      1.640(Ft.)
Minor friction loss =      2.007(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.063(CFS)

Total outflow at this depth =      5.06(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      4.650(Ft.)
Pipe friction loss =      2.089(Ft.)
Minor friction loss =      2.557(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.714(CFS)

Total outflow at this depth =      5.71(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    9.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.650(Ft.)
Pipe friction loss =      2.538(Ft.)
Minor friction loss =      3.106(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.299(CFS)

Total outflow at this depth =      6.30(CFS)

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Total number of inflow hydrograph intervals = 292
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 4.20(Ft.)

Initial basin depth = 4.20 (Ft.)
Initial basin storage = 0.91 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.063	0.000	0.063	0.063
1.500	0.249	0.000	0.249	0.249
2.500	0.479	0.000	0.479	0.479
3.500	0.857	0.000	0.857	0.857
4.200	0.909	0.000	0.909	0.909
4.500	1.116	0.472	1.114	1.118
5.500	1.245	3.404	1.233	1.257
6.500	1.494	4.314	1.479	1.509
7.500	1.724	5.063	1.707	1.741
8.500	1.910	5.714	1.890	1.930
9.500	2.036	6.299	2.014	2.058

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 6.9 13.89 20.83 27.77	Depth (Ft.)
0.083	0.09	0.00	0.909	O | | | |	4.20
0.167	0.50	0.01	0.911	O | | | |	4.20
0.250	0.68	0.01	0.915	O | | | |	4.21
0.333	0.71	0.03	0.920	O | | | |	4.22
0.417	0.72	0.04	0.925	O | | | |	4.22
0.500	0.72	0.05	0.929	O | | | |	4.23
0.583	0.72	0.06	0.934	O | | | |	4.24
0.667	0.72	0.07	0.939	O | | | |	4.24
0.750	0.73	0.08	0.943	O | | | |	4.25
0.833	0.73	0.09	0.947	O | | | |	4.26
0.917	0.73	0.10	0.952	O | | | |	4.26
1.000	0.73	0.11	0.956	O | | | |	4.27
1.083	0.73	0.12	0.960	O | | | |	4.27
1.167	0.74	0.13	0.965	O | | | |	4.28
1.250	0.74	0.14	0.969	O | | | |	4.29
1.333	0.74	0.15	0.973	O | | | |	4.29

1.417	0.74	0.15	0.977	O				4.30
1.500	0.74	0.16	0.981	O				4.30
1.583	0.75	0.17	0.985	O				4.31
1.667	0.75	0.18	0.989	O				4.32
1.750	0.75	0.19	0.993	O				4.32
1.833	0.75	0.20	0.997	O				4.33
1.917	0.76	0.21	1.000	O				4.33
2.000	0.76	0.22	1.004	O				4.34
2.083	0.76	0.23	1.008	O				4.34
2.167	0.76	0.23	1.011	O				4.35
2.250	0.76	0.24	1.015	O				4.35
2.333	0.77	0.25	1.019	O				4.36
2.417	0.77	0.26	1.022	O				4.36
2.500	0.77	0.27	1.026	O				4.37
2.583	0.77	0.27	1.029	O				4.37
2.667	0.78	0.28	1.033	O				4.38
2.750	0.78	0.29	1.036	O				4.38
2.833	0.78	0.30	1.039	O				4.39
2.917	0.78	0.30	1.043	O				4.39
3.000	0.79	0.31	1.046	O				4.40
3.083	0.79	0.32	1.049	O				4.40
3.167	0.79	0.33	1.052	O				4.41
3.250	0.79	0.33	1.056	O				4.41
3.333	0.80	0.34	1.059	O				4.42
3.417	0.80	0.35	1.062	O				4.42
3.500	0.80	0.36	1.065	O				4.43
3.583	0.81	0.36	1.068	O				4.43
3.667	0.81	0.37	1.071	O				4.43
3.750	0.81	0.38	1.074	O				4.44
3.833	0.81	0.38	1.077	O				4.44
3.917	0.82	0.39	1.080	O				4.45
4.000	0.82	0.40	1.083	O				4.45
4.083	0.82	0.40	1.086	O				4.46
4.167	0.83	0.41	1.089	O				4.46
4.250	0.83	0.42	1.092	O				4.46
4.333	0.83	0.42	1.094	O				4.47
4.417	0.83	0.43	1.097	O				4.47
4.500	0.84	0.44	1.100	O				4.48
4.583	0.84	0.44	1.103	O				4.48
4.667	0.84	0.45	1.106	O				4.48
4.750	0.85	0.45	1.108	O				4.49
4.833	0.85	0.46	1.111	O				4.49
4.917	0.85	0.47	1.114	O				4.50
5.000	0.86	0.48	1.116	O				4.50
5.083	0.86	0.53	1.119	O				4.52
5.167	0.86	0.58	1.121	O				4.54
5.250	0.87	0.62	1.123	O				4.55
5.333	0.87	0.66	1.124	OI				4.56
5.417	0.87	0.69	1.126	OI				4.57
5.500	0.88	0.72	1.127	OI				4.58

5.583	0.88	0.74	1.128	OI				4.59
5.667	0.89	0.76	1.129	OI				4.60
5.750	0.89	0.78	1.130	OI				4.60
5.833	0.89	0.80	1.130	OI				4.61
5.917	0.90	0.81	1.131	OI				4.62
6.000	0.90	0.82	1.131	OI				4.62
6.083	0.90	0.83	1.132	OI				4.62
6.167	0.91	0.84	1.132	OI				4.63
6.250	0.91	0.85	1.133	OI				4.63
6.333	0.92	0.86	1.133	OI				4.63
6.417	0.92	0.87	1.134	|O				4.64
6.500	0.92	0.88	1.134	|O				4.64
6.583	0.93	0.88	1.134	|O				4.64
6.667	0.93	0.89	1.134	|O				4.64
6.750	0.94	0.90	1.135	|O				4.65
6.833	0.94	0.90	1.135	|O				4.65
6.917	0.95	0.91	1.135	|O				4.65
7.000	0.95	0.91	1.135	|O				4.65
7.083	0.95	0.92	1.136	|O				4.65
7.167	0.96	0.93	1.136	|O				4.65
7.250	0.96	0.93	1.136	|O				4.66
7.333	0.97	0.94	1.136	|O				4.66
7.417	0.97	0.94	1.137	|O				4.66
7.500	0.98	0.95	1.137	|O				4.66
7.583	0.98	0.95	1.137	|O				4.66
7.667	0.99	0.96	1.137	|O				4.67
7.750	0.99	0.96	1.138	|O				4.67
7.833	1.00	0.97	1.138	|O				4.67
7.917	1.00	0.97	1.138	|O				4.67
8.000	1.01	0.98	1.138	|O				4.67
8.083	1.01	0.98	1.138	|O				4.67
8.167	1.02	0.99	1.139	|O				4.68
8.250	1.02	0.99	1.139	|O				4.68
8.333	1.03	1.00	1.139	|O				4.68
8.417	1.04	1.00	1.139	|O				4.68
8.500	1.04	1.01	1.140	|O				4.68
8.583	1.05	1.01	1.140	|O				4.68
8.667	1.05	1.02	1.140	|O				4.69
8.750	1.06	1.02	1.140	|O				4.69
8.833	1.07	1.03	1.141	|O				4.69
8.917	1.07	1.04	1.141	|O				4.69
9.000	1.08	1.04	1.141	|O				4.69
9.083	1.09	1.05	1.141	|O				4.70
9.167	1.09	1.05	1.142	|O				4.70
9.250	1.10	1.06	1.142	|O				4.70
9.333	1.11	1.07	1.142	|O				4.70
9.417	1.11	1.07	1.142	|O				4.70
9.500	1.12	1.08	1.143	|O				4.71
9.583	1.13	1.09	1.143	|O				4.71
9.667	1.14	1.09	1.143	|O				4.71

9.750	1.14	1.10	1.144	O				4.71
9.833	1.15	1.11	1.144	O				4.72
9.917	1.16	1.11	1.144	O				4.72
10.000	1.17	1.12	1.145	O				4.72
10.083	1.17	1.13	1.145	O				4.72
10.167	1.18	1.13	1.145	O				4.73
10.250	1.19	1.14	1.145	O				4.73
10.333	1.20	1.15	1.146	O				4.73
10.417	1.21	1.16	1.146	O				4.73
10.500	1.22	1.17	1.147	O				4.74
10.583	1.23	1.17	1.147	O				4.74
10.667	1.24	1.18	1.147	O				4.74
10.750	1.25	1.19	1.148	O				4.75
10.833	1.26	1.20	1.148	O				4.75
10.917	1.27	1.21	1.148	O				4.75
11.000	1.28	1.22	1.149	O				4.75
11.083	1.29	1.23	1.149	O				4.76
11.167	1.30	1.24	1.150	O				4.76
11.250	1.31	1.25	1.150	O				4.76
11.333	1.32	1.26	1.151	O				4.77
11.417	1.34	1.27	1.151	O				4.77
11.500	1.35	1.28	1.152	O				4.78
11.583	1.36	1.29	1.152	O				4.78
11.667	1.37	1.30	1.152	O				4.78
11.750	1.39	1.31	1.153	O				4.79
11.833	1.40	1.32	1.154	O				4.79
11.917	1.41	1.34	1.154	O				4.79
12.000	1.43	1.35	1.155	O				4.80
12.083	1.46	1.36	1.155	O				4.80
12.167	1.52	1.38	1.156	O				4.81
12.250	1.56	1.40	1.157	O				4.82
12.333	1.58	1.43	1.158	O				4.83
12.417	1.60	1.45	1.159	O				4.83
12.500	1.61	1.47	1.160	O				4.84
12.583	1.63	1.50	1.161	O				4.85
12.667	1.65	1.52	1.162	O				4.86
12.750	1.67	1.54	1.163	O				4.86
12.833	1.69	1.56	1.164	O				4.87
12.917	1.71	1.58	1.165	O				4.88
13.000	1.73	1.60	1.166	O				4.88
13.083	1.76	1.62	1.167	OI				4.89
13.167	1.78	1.64	1.168	OI				4.90
13.250	1.80	1.66	1.168	OI				4.91
13.333	1.83	1.69	1.169	OI				4.91
13.417	1.86	1.71	1.170	OI				4.92
13.500	1.89	1.73	1.171	OI				4.93
13.583	1.92	1.76	1.173	O				4.94
13.667	1.95	1.78	1.174	O				4.95
13.750	1.98	1.81	1.175	O				4.96
13.833	2.02	1.84	1.176	O				4.97

13.917	2.05	1.86	1.177	O				4.98
14.000	2.09	1.89	1.179	O				4.99
14.083	2.13	1.93	1.180	O				5.00
14.167	2.17	1.96	1.181	O				5.01
14.250	2.22	1.99	1.183	O				5.02
14.333	2.27	2.03	1.185	O				5.03
14.417	2.32	2.07	1.186	O				5.04
14.500	2.38	2.11	1.188	O				5.06
14.583	2.44	2.15	1.190	O				5.07
14.667	2.51	2.20	1.192	O				5.09
14.750	2.57	2.25	1.194	O				5.11
14.833	2.65	2.30	1.196	OI				5.12
14.917	2.73	2.36	1.199	OI				5.14
15.000	2.83	2.42	1.202	OI				5.16
15.083	2.93	2.49	1.205	OI				5.19
15.167	3.06	2.56	1.208	OI				5.21
15.250	3.18	2.64	1.211	O				5.24
15.333	3.35	2.73	1.215	O				5.27
15.417	3.40	2.83	1.220	O				5.30
15.500	3.17	2.89	1.223	O				5.33
15.583	3.20	2.93	1.224	O				5.34
15.667	3.50	3.00	1.227	OI				5.36
15.750	3.88	3.10	1.231	OI				5.40
15.833	4.50	3.26	1.238	O I				5.45
15.917	5.40	3.42	1.250	O I				5.52
16.000	7.57	3.50	1.270	O	I			5.60
16.083	14.38	3.68	1.321	O		I		5.81
16.167	27.77	4.11	1.440	O			I	6.28
16.250	15.28	4.52	1.558	O		I		6.78
16.333	5.95	4.66	1.600	OI				6.96
16.417	4.00	4.66	1.602	IO				6.97
16.500	3.57	4.65	1.596	IO				6.94
16.583	3.36	4.62	1.588	I O				6.91
16.667	3.08	4.59	1.578	I O				6.87
16.750	2.86	4.55	1.567	I O				6.82
16.833	2.67	4.51	1.555	I O				6.77
16.917	2.52	4.47	1.542	I O				6.71
17.000	2.39	4.43	1.528	I O				6.65
17.083	2.28	4.38	1.514	I O				6.59
17.167	2.18	4.33	1.499	I O				6.52
17.250	2.10	4.28	1.484	I O				6.46
17.333	2.02	4.22	1.469	I O				6.40
17.417	1.95	4.17	1.454	I O				6.34
17.500	1.89	4.11	1.439	I O				6.28
17.583	1.84	4.06	1.424	I O				6.22
17.667	1.79	4.00	1.408	I O				6.16
17.750	1.74	3.95	1.393	I O				6.09
17.833	1.69	3.89	1.378	I O				6.03
17.917	1.65	3.83	1.363	I O				5.97
18.000	1.62	3.78	1.348	I O				5.91

18.083	1.57	3.73	1.333	I O				5.85
18.167	1.49	3.67	1.318	I O				5.79
18.250	1.44	3.62	1.303	I O				5.73
18.333	1.40	3.56	1.288	I O				5.67
18.417	1.38	3.51	1.273	I O				5.61
18.500	1.35	3.45	1.259	I O				5.56
18.583	1.33	3.39	1.244	I O				5.50
18.667	1.30	3.09	1.231	I O				5.39
18.750	1.28	2.83	1.220	I O				5.30
18.833	1.26	2.60	1.210	IO				5.23
18.917	1.24	2.41	1.201	IO				5.16
19.000	1.22	2.24	1.194	IO				5.10
19.083	1.20	2.09	1.187	IO				5.05
19.167	1.18	1.96	1.181	IO				5.01
19.250	1.17	1.84	1.176	IO				4.97
19.333	1.15	1.74	1.172	IO				4.93
19.417	1.14	1.66	1.168	O				4.90
19.500	1.12	1.58	1.165	O				4.88
19.583	1.11	1.51	1.162	O				4.85
19.667	1.09	1.45	1.159	O				4.83
19.750	1.08	1.40	1.157	O				4.82
19.833	1.07	1.35	1.155	O				4.80
19.917	1.05	1.31	1.153	O				4.79
20.000	1.04	1.27	1.151	O				4.77
20.083	1.03	1.24	1.150	O				4.76
20.167	1.02	1.21	1.148	O				4.75
20.250	1.01	1.18	1.147	O				4.74
20.333	1.00	1.15	1.146	O				4.73
20.417	0.99	1.13	1.145	O				4.72
20.500	0.98	1.11	1.144	O				4.72
20.583	0.97	1.09	1.143	O				4.71
20.667	0.96	1.07	1.142	O				4.70
20.750	0.95	1.05	1.142	O				4.70
20.833	0.94	1.04	1.141	O				4.69
20.917	0.93	1.02	1.140	O				4.69
21.000	0.92	1.01	1.140	O				4.68
21.083	0.92	1.00	1.139	O				4.68
21.167	0.91	0.98	1.139	O				4.67
21.250	0.90	0.97	1.138	O				4.67
21.333	0.89	0.96	1.138	O				4.67
21.417	0.89	0.95	1.137	O				4.66
21.500	0.88	0.94	1.137	O				4.66
21.583	0.87	0.93	1.136	O				4.66
21.667	0.86	0.92	1.136	IO				4.65
21.750	0.86	0.91	1.135	IO				4.65
21.833	0.85	0.90	1.135	IO				4.65
21.917	0.84	0.90	1.135	IO				4.64
22.000	0.84	0.89	1.134	IO				4.64
22.083	0.83	0.88	1.134	IO				4.64
22.167	0.83	0.87	1.134	IO				4.64

22.250	0.82	0.87	1.133	O				4.63
22.333	0.81	0.86	1.133	O				4.63
22.417	0.81	0.85	1.133	O				4.63
22.500	0.80	0.85	1.132	O				4.63
22.583	0.80	0.84	1.132	O				4.63
22.667	0.79	0.83	1.132	O				4.62
22.750	0.79	0.83	1.132	O				4.62
22.833	0.78	0.82	1.131	O				4.62
22.917	0.78	0.81	1.131	O				4.62
23.000	0.77	0.81	1.131	O				4.61
23.083	0.77	0.80	1.131	O				4.61
23.167	0.76	0.80	1.130	O				4.61
23.250	0.76	0.79	1.130	O				4.61
23.333	0.75	0.79	1.130	O				4.61
23.417	0.75	0.78	1.130	O				4.61
23.500	0.74	0.78	1.129	O				4.60
23.583	0.74	0.77	1.129	O				4.60
23.667	0.74	0.77	1.129	O				4.60
23.750	0.73	0.76	1.129	O				4.60
23.833	0.73	0.76	1.129	O				4.60
23.917	0.72	0.75	1.128	O				4.60
24.000	0.72	0.75	1.128	O				4.59
24.083	0.62	0.74	1.128	O				4.59
24.167	0.22	0.69	1.126	O				4.57
24.250	0.03	0.61	1.122	O				4.55
24.333	0.01	0.52	1.118	O				4.52
24.417	0.00	0.47	1.115	O				4.50
24.500	0.00	0.46	1.112	O				4.49
24.583	0.00	0.45	1.108	O				4.49
24.667	0.00	0.45	1.105	O				4.48
24.750	0.00	0.44	1.102	O				4.48
24.833	0.00	0.43	1.099	O				4.48
24.917	0.00	0.43	1.096	O				4.47
25.000	0.00	0.42	1.093	O				4.47
25.083	0.00	0.41	1.091	O				4.46
25.167	0.00	0.41	1.088	O				4.46
25.250	0.00	0.40	1.085	O				4.45
25.333	0.00	0.39	1.082	O				4.45
25.417	0.00	0.39	1.079	O				4.45
25.500	0.00	0.38	1.077	O				4.44
25.583	0.00	0.38	1.074	O				4.44
25.667	0.00	0.37	1.072	O				4.44
25.750	0.00	0.37	1.069	O				4.43
25.833	0.00	0.36	1.067	O				4.43
25.917	0.00	0.35	1.064	O				4.42
26.000	0.00	0.35	1.062	O				4.42
26.083	0.00	0.34	1.059	O				4.42
26.167	0.00	0.34	1.057	O				4.41
26.250	0.00	0.33	1.055	O				4.41
26.333	0.00	0.33	1.052	O				4.41

26.417	0.00	0.32	1.050	O				4.40
26.500	0.00	0.32	1.048	O				4.40
26.583	0.00	0.31	1.046	O				4.40
26.667	0.00	0.31	1.044	O				4.40
26.750	0.00	0.30	1.042	O				4.39
26.833	0.00	0.30	1.040	O				4.39
26.917	0.00	0.29	1.038	O				4.39
27.000	0.00	0.29	1.036	O				4.38
27.083	0.00	0.28	1.034	O				4.38
27.167	0.00	0.28	1.032	O				4.38
27.250	0.00	0.28	1.030	O				4.37
27.333	0.00	0.27	1.028	O				4.37
27.417	0.00	0.27	1.026	O				4.37
27.500	0.00	0.26	1.024	O				4.37
27.583	0.00	0.26	1.022	O				4.36
27.667	0.00	0.25	1.021	O				4.36
27.750	0.00	0.25	1.019	O				4.36
27.833	0.00	0.25	1.017	O				4.36
27.917	0.00	0.24	1.015	O				4.35
28.000	0.00	0.24	1.014	O				4.35
28.083	0.00	0.24	1.012	O				4.35
28.167	0.00	0.23	1.011	O				4.35
28.250	0.00	0.23	1.009	O				4.34
28.333	0.00	0.22	1.007	O				4.34
28.417	0.00	0.22	1.006	O				4.34
28.500	0.00	0.22	1.004	O				4.34
28.583	0.00	0.21	1.003	O				4.34
28.667	0.00	0.21	1.001	O				4.33
28.750	0.00	0.21	1.000	O				4.33
28.833	0.00	0.20	0.999	O				4.33
28.917	0.00	0.20	0.997	O				4.33
29.000	0.00	0.20	0.996	O				4.33
29.083	0.00	0.19	0.994	O				4.32
29.167	0.00	0.19	0.993	O				4.32
29.250	0.00	0.19	0.992	O				4.32
29.333	0.00	0.19	0.991	O				4.32
29.417	0.00	0.18	0.989	O				4.32
29.500	0.00	0.18	0.988	O				4.31
29.583	0.00	0.18	0.987	O				4.31
29.667	0.00	0.17	0.986	O				4.31
29.750	0.00	0.17	0.984	O				4.31
29.833	0.00	0.17	0.983	O				4.31
29.917	0.00	0.17	0.982	O				4.31
30.000	0.00	0.16	0.981	O				4.30
30.083	0.00	0.16	0.980	O				4.30
30.167	0.00	0.16	0.979	O				4.30
30.250	0.00	0.16	0.978	O				4.30
30.333	0.00	0.15	0.977	O				4.30
30.417	0.00	0.15	0.975	O				4.30
30.500	0.00	0.15	0.974	O				4.29

30.583	0.00	0.15	0.973	O				4.29
30.667	0.00	0.14	0.972	O				4.29
30.750	0.00	0.14	0.971	O				4.29
30.833	0.00	0.14	0.970	O				4.29
30.917	0.00	0.14	0.969	O				4.29
31.000	0.00	0.14	0.969	O				4.29
31.083	0.00	0.13	0.968	O				4.28
31.167	0.00	0.13	0.967	O				4.28
31.250	0.00	0.13	0.966	O				4.28
31.333	0.00	0.13	0.965	O				4.28
31.417	0.00	0.13	0.964	O				4.28
31.500	0.00	0.12	0.963	O				4.28
31.583	0.00	0.12	0.962	O				4.28
31.667	0.00	0.12	0.962	O				4.28
31.750	0.00	0.12	0.961	O				4.27
31.833	0.00	0.12	0.960	O				4.27
31.917	0.00	0.11	0.959	O				4.27
32.000	0.00	0.11	0.958	O				4.27
32.083	0.00	0.11	0.958	O				4.27
32.167	0.00	0.11	0.957	O				4.27
32.250	0.00	0.11	0.956	O				4.27
32.333	0.00	0.11	0.955	O				4.27
32.417	0.00	0.10	0.955	O				4.27
32.500	0.00	0.10	0.954	O				4.27
32.583	0.00	0.10	0.953	O				4.26
32.667	0.00	0.10	0.952	O				4.26
32.750	0.00	0.10	0.952	O				4.26
32.833	0.00	0.10	0.951	O				4.26
32.917	0.00	0.09	0.950	O				4.26
33.000	0.00	0.09	0.950	O				4.26
33.083	0.00	0.09	0.949	O				4.26
33.167	0.00	0.09	0.949	O				4.26
33.250	0.00	0.09	0.948	O				4.26
33.333	0.00	0.09	0.947	O				4.26
33.417	0.00	0.09	0.947	O				4.25
33.500	0.00	0.08	0.946	O				4.25
33.583	0.00	0.08	0.946	O				4.25
33.667	0.00	0.08	0.945	O				4.25
33.750	0.00	0.08	0.944	O				4.25
33.833	0.00	0.08	0.944	O				4.25
33.917	0.00	0.08	0.943	O				4.25
34.000	0.00	0.08	0.943	O				4.25
34.083	0.00	0.08	0.942	O				4.25
34.167	0.00	0.07	0.942	O				4.25
34.250	0.00	0.07	0.941	O				4.25
34.333	0.00	0.07	0.941	O				4.25
34.417	0.00	0.07	0.940	O				4.25
34.500	0.00	0.07	0.940	O				4.24
34.583	0.00	0.07	0.939	O				4.24
34.667	0.00	0.07	0.939	O				4.24

34.750	0.00	0.07	0.938	O					4.24
34.833	0.00	0.07	0.938	O					4.24
34.917	0.00	0.06	0.937	O					4.24
35.000	0.00	0.06	0.937	O					4.24
35.083	0.00	0.06	0.937	O					4.24
35.167	0.00	0.06	0.936	O					4.24
35.250	0.00	0.06	0.936	O					4.24
35.333	0.00	0.06	0.935	O					4.24
35.417	0.00	0.06	0.935	O					4.24
35.500	0.00	0.06	0.934	O					4.24
35.583	0.00	0.06	0.934	O					4.24
35.667	0.00	0.06	0.934	O					4.24
35.750	0.00	0.06	0.933	O					4.24
35.833	0.00	0.05	0.933	O					4.23
35.917	0.00	0.05	0.933	O					4.23
36.000	0.00	0.05	0.932	O					4.23
36.083	0.00	0.05	0.932	O					4.23
36.167	0.00	0.05	0.931	O					4.23
36.250	0.00	0.05	0.931	O					4.23
36.333	0.00	0.05	0.931	O					4.23
36.417	0.00	0.05	0.930	O					4.23
36.500	0.00	0.05	0.930	O					4.23
36.583	0.00	0.05	0.930	O					4.23
36.667	0.00	0.05	0.929	O					4.23
36.750	0.00	0.05	0.929	O					4.23
36.833	0.00	0.05	0.929	O					4.23
36.917	0.00	0.04	0.929	O					4.23
37.000	0.00	0.04	0.928	O					4.23
37.083	0.00	0.04	0.928	O					4.23
37.167	0.00	0.04	0.928	O					4.23
37.250	0.00	0.04	0.927	O					4.23
37.333	0.00	0.04	0.927	O					4.23
37.417	0.00	0.04	0.927	O					4.23
37.500	0.00	0.04	0.926	O					4.23
37.583	0.00	0.04	0.926	O					4.22
37.667	0.00	0.04	0.926	O					4.22
37.750	0.00	0.04	0.926	O					4.22
37.833	0.00	0.04	0.925	O					4.22
37.917	0.00	0.04	0.925	O					4.22
38.000	0.00	0.04	0.925	O					4.22
38.083	0.00	0.04	0.925	O					4.22
38.167	0.00	0.04	0.924	O					4.22
38.250	0.00	0.03	0.924	O					4.22
38.333	0.00	0.03	0.924	O					4.22
38.417	0.00	0.03	0.924	O					4.22
38.500	0.00	0.03	0.923	O					4.22
38.583	0.00	0.03	0.923	O					4.22
38.667	0.00	0.03	0.923	O					4.22
38.750	0.00	0.03	0.923	O					4.22
38.833	0.00	0.03	0.923	O					4.22

38.917	0.00	0.03	0.922	O				4.22
39.000	0.00	0.03	0.922	O				4.22
39.083	0.00	0.03	0.922	O				4.22
39.167	0.00	0.03	0.922	O				4.22
39.250	0.00	0.03	0.922	O				4.22
39.333	0.00	0.03	0.921	O				4.22
39.417	0.00	0.03	0.921	O				4.22
39.500	0.00	0.03	0.921	O				4.22
39.583	0.00	0.03	0.921	O				4.22
39.667	0.00	0.03	0.921	O				4.22
39.750	0.00	0.03	0.920	O				4.22
39.833	0.00	0.03	0.920	O				4.22
39.917	0.00	0.03	0.920	O				4.22
40.000	0.00	0.02	0.920	O				4.22
40.083	0.00	0.02	0.920	O				4.22
40.167	0.00	0.02	0.920	O				4.22
40.250	0.00	0.02	0.919	O				4.22
40.333	0.00	0.02	0.919	O				4.21
40.417	0.00	0.02	0.919	O				4.21
40.500	0.00	0.02	0.919	O				4.21
40.583	0.00	0.02	0.919	O				4.21
40.667	0.00	0.02	0.919	O				4.21
40.750	0.00	0.02	0.918	O				4.21
40.833	0.00	0.02	0.918	O				4.21
40.917	0.00	0.02	0.918	O				4.21
41.000	0.00	0.02	0.918	O				4.21
41.083	0.00	0.02	0.918	O				4.21
41.167	0.00	0.02	0.918	O				4.21
41.250	0.00	0.02	0.918	O				4.21
41.333	0.00	0.02	0.917	O				4.21
41.417	0.00	0.02	0.917	O				4.21
41.500	0.00	0.02	0.917	O				4.21
41.583	0.00	0.02	0.917	O				4.21
41.667	0.00	0.02	0.917	O				4.21
41.750	0.00	0.02	0.917	O				4.21
41.833	0.00	0.02	0.917	O				4.21
41.917	0.00	0.02	0.917	O				4.21
42.000	0.00	0.02	0.916	O				4.21
42.083	0.00	0.02	0.916	O				4.21
42.167	0.00	0.02	0.916	O				4.21
42.250	0.00	0.02	0.916	O				4.21
42.333	0.00	0.02	0.916	O				4.21
42.417	0.00	0.02	0.916	O				4.21
42.500	0.00	0.02	0.916	O				4.21
42.583	0.00	0.02	0.916	O				4.21
42.667	0.00	0.02	0.916	O				4.21
42.750	0.00	0.01	0.916	O				4.21
42.833	0.00	0.01	0.915	O				4.21
42.917	0.00	0.01	0.915	O				4.21
43.000	0.00	0.01	0.915	O				4.21

43.083	0.00	0.01	0.915	O				4.21
43.167	0.00	0.01	0.915	O				4.21
43.250	0.00	0.01	0.915	O				4.21
43.333	0.00	0.01	0.915	O				4.21
43.417	0.00	0.01	0.915	O				4.21
43.500	0.00	0.01	0.915	O				4.21
43.583	0.00	0.01	0.915	O				4.21
43.667	0.00	0.01	0.914	O				4.21
43.750	0.00	0.01	0.914	O				4.21
43.833	0.00	0.01	0.914	O				4.21
43.917	0.00	0.01	0.914	O				4.21
44.000	0.00	0.01	0.914	O				4.21
44.083	0.00	0.01	0.914	O				4.21
44.167	0.00	0.01	0.914	O				4.21
44.250	0.00	0.01	0.914	O				4.21
44.333	0.00	0.01	0.914	O				4.21
44.417	0.00	0.01	0.914	O				4.21
44.500	0.00	0.01	0.914	O				4.21
44.583	0.00	0.01	0.914	O				4.21
44.667	0.00	0.01	0.914	O				4.21
44.750	0.00	0.01	0.913	O				4.21
44.833	0.00	0.01	0.913	O				4.21
44.917	0.00	0.01	0.913	O				4.21
45.000	0.00	0.01	0.913	O				4.21
45.083	0.00	0.01	0.913	O				4.21
45.167	0.00	0.01	0.913	O				4.21
45.250	0.00	0.01	0.913	O				4.21
45.333	0.00	0.01	0.913	O				4.21
45.417	0.00	0.01	0.913	O				4.21
45.500	0.00	0.01	0.913	O				4.21
45.583	0.00	0.01	0.913	O				4.21
45.667	0.00	0.01	0.913	O				4.21
45.750	0.00	0.01	0.913	O				4.21
45.833	0.00	0.01	0.913	O				4.21
45.917	0.00	0.01	0.913	O				4.21
46.000	0.00	0.01	0.913	O				4.21
46.083	0.00	0.01	0.912	O				4.21
46.167	0.00	0.01	0.912	O				4.20
46.250	0.00	0.01	0.912	O				4.20
46.333	0.00	0.01	0.912	O				4.20
46.417	0.00	0.01	0.912	O				4.20
46.500	0.00	0.01	0.912	O				4.20
46.583	0.00	0.01	0.912	O				4.20
46.667	0.00	0.01	0.912	O				4.20
46.750	0.00	0.01	0.912	O				4.20
46.833	0.00	0.01	0.912	O				4.20
46.917	0.00	0.01	0.912	O				4.20
47.000	0.00	0.01	0.912	O				4.20
47.083	0.00	0.01	0.912	O				4.20
47.167	0.00	0.01	0.912	O				4.20

47.250	0.00	0.01	0.912	O				4.20
47.333	0.00	0.01	0.912	O				4.20
47.417	0.00	0.01	0.912	O				4.20
47.500	0.00	0.01	0.912	O				4.20
47.583	0.00	0.01	0.912	O				4.20
47.667	0.00	0.01	0.912	O				4.20
47.750	0.00	0.01	0.912	O				4.20
47.833	0.00	0.01	0.911	O				4.20
47.917	0.00	0.01	0.911	O				4.20
48.000	0.00	0.01	0.911	O				4.20
48.083	0.00	0.01	0.911	O				4.20
48.167	0.00	0.01	0.911	O				4.20
48.250	0.00	0.01	0.911	O				4.20
48.333	0.00	0.01	0.911	O				4.20
48.417	0.00	0.01	0.911	O				4.20
48.500	0.00	0.01	0.911	O				4.20
48.583	0.00	0.00	0.911	O				4.20
48.667	0.00	0.00	0.911	O				4.20
48.750	0.00	0.00	0.911	O				4.20
48.833	0.00	0.00	0.911	O				4.20
48.917	0.00	0.00	0.911	O				4.20
49.000	0.00	0.00	0.911	O				4.20
49.083	0.00	0.00	0.911	O				4.20
49.167	0.00	0.00	0.911	O				4.20
49.250	0.00	0.00	0.911	O				4.20
49.333	0.00	0.00	0.911	O				4.20
49.417	0.00	0.00	0.911	O				4.20
49.500	0.00	0.00	0.911	O				4.20
49.583	0.00	0.00	0.911	O				4.20
49.667	0.00	0.00	0.911	O				4.20
49.750	0.00	0.00	0.911	O				4.20
49.833	0.00	0.00	0.911	O				4.20
49.917	0.00	0.00	0.911	O				4.20
50.000	0.00	0.00	0.911	O				4.20
50.083	0.00	0.00	0.911	O				4.20
50.167	0.00	0.00	0.911	O				4.20
50.250	0.00	0.00	0.911	O				4.20
50.333	0.00	0.00	0.911	O				4.20
50.417	0.00	0.00	0.911	O				4.20
50.500	0.00	0.00	0.911	O				4.20
50.583	0.00	0.00	0.910	O				4.20
50.667	0.00	0.00	0.910	O				4.20
50.750	0.00	0.00	0.910	O				4.20
50.833	0.00	0.00	0.910	O				4.20
50.917	0.00	0.00	0.910	O				4.20
51.000	0.00	0.00	0.910	O				4.20
51.083	0.00	0.00	0.910	O				4.20
51.167	0.00	0.00	0.910	O				4.20
51.250	0.00	0.00	0.910	O				4.20
51.333	0.00	0.00	0.910	O				4.20

51.417	0.00	0.00	0.910	O	|	|	|	4.20
51.500	0.00	0.00	0.910	O	|	|	|	4.20
51.583	0.00	0.00	0.910	O	|	|	|	4.20
51.667	0.00	0.00	0.910	O	|	|	|	4.20
51.750	0.00	0.00	0.910	O	|	|	|	4.20
51.833	0.00	0.00	0.910	O	|	|	|	4.20
51.917	0.00	0.00	0.910	O	|	|	|	4.20
52.000	0.00	0.00	0.910	O	|	|	|	4.20
52.083	0.00	0.00	0.910	O	|	|	|	4.20
52.167	0.00	0.00	0.910	O	|	|	|	4.20
52.250	0.00	0.00	0.910	O	|	|	|	4.20
52.333	0.00	0.00	0.910	O	|	|	|	4.20
52.417	0.00	0.00	0.910	O	|	|	|	4.20
52.500	0.00	0.00	0.910	O	|	|	|	4.20
52.583	0.00	0.00	0.910	O	|	|	|	4.20
52.667	0.00	0.00	0.910	O	|	|	|	4.20
52.750	0.00	0.00	0.910	O	|	|	|	4.20
52.833	0.00	0.00	0.910	O	|	|	|	4.20
52.917	0.00	0.00	0.910	O	|	|	|	4.20
53.000	0.00	0.00	0.910	O	|	|	|	4.20
53.083	0.00	0.00	0.910	O	|	|	|	4.20
53.167	0.00	0.00	0.910	O	|	|	|	4.20
53.250	0.00	0.00	0.910	O	|	|	|	4.20
53.333	0.00	0.00	0.910	O	|	|	|	4.20
53.417	0.00	0.00	0.910	O	|	|	|	4.20
53.500	0.00	0.00	0.910	O	|	|	|	4.20
53.583	0.00	0.00	0.910	O	|	|	|	4.20
53.667	0.00	0.00	0.910	O	|	|	|	4.20
53.750	0.00	0.00	0.910	O	|	|	|	4.20
53.833	0.00	0.00	0.910	O	|	|	|	4.20
53.917	0.00	0.00	0.910	O	|	|	|	4.20
54.000	0.00	0.00	0.910	O	|	|	|	4.20
54.083	0.00	0.00	0.910	O	|	|	|	4.20
54.167	0.00	0.00	0.910	O	|	|	|	4.20
54.250	0.00	0.00	0.910	O	|	|	|	4.20
54.333	0.00	0.00	0.910	O	|	|	|	4.20
54.417	0.00	0.00	0.910	O	|	|	|	4.20
54.500	0.00	0.00	0.910	O	|	|	|	4.20
54.583	0.00	0.00	0.910	O	|	|	|	4.20
54.667	0.00	0.00	0.910	O	|	|	|	4.20
54.750	0.00	0.00	0.910	O	|	|	|	4.20
54.833	0.00	0.00	0.910	O	|	|	|	4.20
54.917	0.00	0.00	0.910	O	|	|	|	4.20
55.000	0.00	0.00	0.910	O	|	|	|	4.20
55.083	0.00	0.00	0.910	O	|	|	|	4.20
55.167	0.00	0.00	0.910	O	|	|	|	4.20
55.250	0.00	0.00	0.910	O	|	|	|	4.20
55.333	0.00	0.00	0.910	O	|	|	|	4.20
55.417	0.00	0.00	0.910	O	|	|	|	4.20
55.500	0.00	0.00	0.910	O	|	|	|	4.20

55.583	0.00	0.00	0.910	O	|	|	|	| 4.20
55.667	0.00	0.00	0.910	O	|	|	|	| 4.20
55.750	0.00	0.00	0.910	O	|	|	|	| 4.20
55.833	0.00	0.00	0.910	O	|	|	|	| 4.20
55.917	0.00	0.00	0.910	O	|	|	|	| 4.20
56.000	0.00	0.00	0.910	O	|	|	|	| 4.20
56.083	0.00	0.00	0.910	O	|	|	|	| 4.20
56.167	0.00	0.00	0.910	O	|	|	|	| 4.20
56.250	0.00	0.00	0.910	O	|	|	|	| 4.20
56.333	0.00	0.00	0.910	O	|	|	|	| 4.20
56.417	0.00	0.00	0.909	O	|	|	|	| 4.20
56.500	0.00	0.00	0.909	O	|	|	|	| 4.20
56.583	0.00	0.00	0.909	O	|	|	|	| 4.20
56.667	0.00	0.00	0.909	O	|	|	|	| 4.20
56.750	0.00	0.00	0.909	O	|	|	|	| 4.20
56.833	0.00	0.00	0.909	O	|	|	|	| 4.20
56.917	0.00	0.00	0.909	O	|	|	|	| 4.20
57.000	0.00	0.00	0.909	O	|	|	|	| 4.20
57.083	0.00	0.00	0.909	O	|	|	|	| 4.20

**********HYDROGRAPH DATA**********

Number of intervals = 685
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.665 (CFS)
Total volume = 3.007 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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FLOOD HYDROGRAPH ROUTING PROGRAM

Study date: 08/15/22

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
25-YEAR, 24-HOUR STORM
BY: FA DATE: 08-15-22

Program License Serial Number 6320

********** HYDROGRAPH INFORMATION **********

From study/file name: DEVHYDA25.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 33.013 (CFS)
Total volume = 3.700 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 3.000 to Point/Station 6.000
**** RETARDING BASIN ROUTING ****
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Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))
Total outflow at this depth = 0.00(CFS)

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CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.20(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
Calculated individual pipe flow  =     0.472(CFS)
Normal flow depth in pipe =    3.05(In.)
Flow top width inside pipe =    9.21(In.)
Critical Depth =    0.30(Ft.)
Calculated flow rate through pipe(s) =      0.472(CFS)

Total outflow at this depth =      0.47(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.650(Ft.)
Pipe friction loss =      0.741(Ft.)
Minor friction loss =      0.907(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      3.404(CFS)

Total outflow at this depth =      3.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
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The total friction loss through the pipe is      2.650(Ft.)
Pipe friction loss =      1.190(Ft.)
Minor friction loss =      1.457(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      4.314(CFS)

Total outflow at this depth =      4.31(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.650(Ft.)
Pipe friction loss =      1.640(Ft.)
Minor friction loss =      2.007(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.063(CFS)

Total outflow at this depth =      5.06(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      4.650(Ft.)
Pipe friction loss =      2.089(Ft.)
Minor friction loss =      2.557(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.714(CFS)

Total outflow at this depth =      5.71(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    9.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.650(Ft.)
Pipe friction loss =      2.538(Ft.)
Minor friction loss =      3.106(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.299(CFS)

Total outflow at this depth =      6.30(CFS)

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Total number of inflow hydrograph intervals = 292
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 4.20(Ft.)

Initial basin depth = 4.20 (Ft.)
Initial basin storage = 0.91 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.063	0.000	0.063	0.063
1.500	0.249	0.000	0.249	0.249
2.500	0.479	0.000	0.479	0.479
3.500	0.857	0.000	0.857	0.857
4.200	0.909	0.000	0.909	0.909
4.500	1.116	0.472	1.114	1.118
5.500	1.245	3.404	1.233	1.257
6.500	1.494	4.314	1.479	1.509
7.500	1.724	5.063	1.707	1.741
8.500	1.910	5.714	1.890	1.930
9.500	2.036	6.299	2.014	2.058

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 8.3 16.51 24.76 33.01	Depth (Ft.)
0.083	0.12	0.00	0.909	O | | | |	4.20
0.167	0.65	0.01	0.912	O | | | |	4.20
0.250	0.89	0.02	0.917	O | | | |	4.21
0.333	0.92	0.03	0.923	O | | | |	4.22
0.417	0.93	0.05	0.929	O | | | |	4.23
0.500	0.93	0.06	0.935	O | | | |	4.24
0.583	0.93	0.07	0.941	O | | | |	4.25
0.667	0.94	0.09	0.947	O | | | |	4.26
0.750	0.94	0.10	0.953	O | | | |	4.26
0.833	0.94	0.11	0.959	O | | | |	4.27
0.917	0.94	0.13	0.964	O | | | |	4.28
1.000	0.95	0.14	0.970	O | | | |	4.29
1.083	0.95	0.15	0.976	O | | | |	4.30
1.167	0.95	0.16	0.981	O | | | |	4.30
1.250	0.95	0.18	0.986	O | | | |	4.31
1.333	0.96	0.19	0.992	O | | | |	4.32

1.417	0.96	0.20	0.997	O	|	|	|	4.33
1.500	0.96	0.21	1.002	O	|	|	|	4.34
1.583	0.96	0.22	1.007	O	|	|	|	4.34
1.667	0.97	0.24	1.012	O	|	|	|	4.35
1.750	0.97	0.25	1.017	O	|	|	|	4.36
1.833	0.97	0.26	1.022	O	|	|	|	4.36
1.917	0.98	0.27	1.027	O	|	|	|	4.37
2.000	0.98	0.28	1.032	O	|	|	|	4.38
2.083	0.98	0.29	1.037	O	|	|	|	4.39
2.167	0.98	0.30	1.042	O	|	|	|	4.39
2.250	0.99	0.31	1.046	O	|	|	|	4.40
2.333	0.99	0.32	1.051	O	|	|	|	4.41
2.417	0.99	0.33	1.055	O	|	|	|	4.41
2.500	1.00	0.34	1.060	O	|	|	|	4.42
2.583	1.00	0.35	1.064	O	|	|	|	4.43
2.667	1.00	0.36	1.069	O	|	|	|	4.43
2.750	1.00	0.37	1.073	O	|	|	|	4.44
2.833	1.01	0.38	1.077	O	|	|	|	4.44
2.917	1.01	0.39	1.082	O	|	|	|	4.45
3.000	1.01	0.40	1.086	O	|	|	|	4.46
3.083	1.02	0.41	1.090	O	|	|	|	4.46
3.167	1.02	0.42	1.094	O	|	|	|	4.47
3.250	1.02	0.43	1.098	O	|	|	|	4.47
3.333	1.03	0.44	1.102	O	|	|	|	4.48
3.417	1.03	0.45	1.106	O	|	|	|	4.49
3.500	1.03	0.46	1.110	OI	|	|	|	4.49
3.583	1.04	0.47	1.114	OI	|	|	|	4.50
3.667	1.04	0.52	1.118	OI	|	|	|	4.52
3.750	1.04	0.60	1.121	OI	|	|	|	4.54
3.833	1.05	0.66	1.124	OI	|	|	|	4.56
3.917	1.05	0.72	1.127	OI	|	|	|	4.58
4.000	1.05	0.77	1.129	OI	|	|	|	4.60
4.083	1.06	0.81	1.131	OI	|	|	|	4.61
4.167	1.06	0.85	1.132	OI	|	|	|	4.63
4.250	1.07	0.88	1.134	OI	|	|	|	4.64
4.333	1.07	0.90	1.135	OI	|	|	|	4.65
4.417	1.07	0.93	1.136	OI	|	|	|	4.66
4.500	1.08	0.95	1.137	OI	|	|	|	4.66
4.583	1.08	0.97	1.138	OI	|	|	|	4.67
4.667	1.08	0.99	1.139	OI	|	|	|	4.68
4.750	1.09	1.00	1.139	OI	|	|	|	4.68
4.833	1.09	1.01	1.140	OI	|	|	|	4.68
4.917	1.10	1.02	1.140	OI	|	|	|	4.69
5.000	1.10	1.04	1.141	|O	|	|	|	4.69
5.083	1.10	1.05	1.141	|O	|	|	|	4.70
5.167	1.11	1.05	1.142	|O	|	|	|	4.70
5.250	1.11	1.06	1.142	|O	|	|	|	4.70
5.333	1.12	1.07	1.142	|O	|	|	|	4.70
5.417	1.12	1.08	1.143	|O	|	|	|	4.71
5.500	1.13	1.08	1.143	|O	|	|	|	4.71

5.583	1.13	1.09	1.143	O				4.71
5.667	1.13	1.10	1.143	O				4.71
5.750	1.14	1.10	1.144	O				4.71
5.833	1.14	1.11	1.144	O				4.72
5.917	1.15	1.11	1.144	O				4.72
6.000	1.15	1.12	1.144	O				4.72
6.083	1.16	1.12	1.145	O				4.72
6.167	1.16	1.13	1.145	O				4.72
6.250	1.17	1.13	1.145	O				4.73
6.333	1.17	1.14	1.145	O				4.73
6.417	1.18	1.14	1.146	O				4.73
6.500	1.18	1.15	1.146	O				4.73
6.583	1.19	1.15	1.146	O				4.73
6.667	1.19	1.16	1.146	O				4.73
6.750	1.20	1.16	1.146	O				4.74
6.833	1.20	1.17	1.147	O				4.74
6.917	1.21	1.17	1.147	O				4.74
7.000	1.21	1.18	1.147	O				4.74
7.083	1.22	1.19	1.147	O				4.74
7.167	1.22	1.19	1.148	O				4.74
7.250	1.23	1.20	1.148	O				4.75
7.333	1.24	1.20	1.148	O				4.75
7.417	1.24	1.21	1.148	O				4.75
7.500	1.25	1.21	1.149	O				4.75
7.583	1.25	1.22	1.149	O				4.75
7.667	1.26	1.22	1.149	O				4.76
7.750	1.26	1.23	1.149	O				4.76
7.833	1.27	1.23	1.150	O				4.76
7.917	1.28	1.24	1.150	O				4.76
8.000	1.28	1.25	1.150	O				4.76
8.083	1.29	1.25	1.150	O				4.77
8.167	1.30	1.26	1.151	O				4.77
8.250	1.30	1.26	1.151	O				4.77
8.333	1.31	1.27	1.151	O				4.77
8.417	1.32	1.28	1.151	O				4.77
8.500	1.32	1.28	1.152	O				4.78
8.583	1.33	1.29	1.152	O				4.78
8.667	1.34	1.30	1.152	O				4.78
8.750	1.35	1.30	1.153	O				4.78
8.833	1.35	1.31	1.153	O				4.79
8.917	1.36	1.32	1.153	O				4.79
9.000	1.37	1.32	1.153	O				4.79
9.083	1.38	1.33	1.154	O				4.79
9.167	1.39	1.34	1.154	O				4.80
9.250	1.39	1.35	1.154	O				4.80
9.333	1.40	1.35	1.155	O				4.80
9.417	1.41	1.36	1.155	O				4.80
9.500	1.42	1.37	1.155	O				4.81
9.583	1.43	1.38	1.156	O				4.81
9.667	1.44	1.38	1.156	O				4.81

9.750	1.45	1.39	1.157	O				4.81
9.833	1.46	1.40	1.157	O				4.82
9.917	1.46	1.41	1.157	O				4.82
10.000	1.48	1.42	1.158	O				4.82
10.083	1.48	1.43	1.158	O				4.83
10.167	1.50	1.44	1.158	O				4.83
10.250	1.50	1.45	1.159	O				4.83
10.333	1.52	1.46	1.159	O				4.84
10.417	1.53	1.46	1.160	O				4.84
10.500	1.54	1.47	1.160	O				4.84
10.583	1.55	1.48	1.161	O				4.85
10.667	1.56	1.49	1.161	O				4.85
10.750	1.57	1.51	1.161	O				4.85
10.833	1.58	1.52	1.162	O				4.86
10.917	1.60	1.53	1.162	O				4.86
11.000	1.61	1.54	1.163	O				4.86
11.083	1.62	1.55	1.163	O				4.87
11.167	1.64	1.56	1.164	O				4.87
11.250	1.65	1.57	1.164	O				4.88
11.333	1.66	1.58	1.165	O				4.88
11.417	1.68	1.60	1.166	O				4.88
11.500	1.69	1.61	1.166	O				4.89
11.583	1.71	1.62	1.167	O				4.89
11.667	1.72	1.64	1.167	O				4.90
11.750	1.74	1.65	1.168	O				4.90
11.833	1.76	1.66	1.168	O				4.91
11.917	1.77	1.68	1.169	O				4.91
12.000	1.79	1.69	1.170	O				4.92
12.083	1.81	1.71	1.170	O				4.92
12.167	1.83	1.72	1.171	O				4.93
12.250	1.85	1.74	1.172	O				4.93
12.333	1.87	1.76	1.173	O				4.94
12.417	1.89	1.78	1.173	O				4.94
12.500	1.91	1.79	1.174	O				4.95
12.583	1.93	1.81	1.175	O				4.96
12.667	1.96	1.83	1.176	O				4.96
12.750	1.98	1.85	1.177	O				4.97
12.833	2.00	1.87	1.178	O				4.98
12.917	2.03	1.89	1.179	O				4.98
13.000	2.06	1.91	1.179	O				4.99
13.083	2.08	1.94	1.180	OI				5.00
13.167	2.11	1.96	1.181	OI				5.01
13.250	2.14	1.98	1.183	OI				5.02
13.333	2.17	2.01	1.184	OI				5.02
13.417	2.20	2.03	1.185	OI				5.03
13.500	2.24	2.06	1.186	OI				5.04
13.583	2.27	2.09	1.187	O				5.05
13.667	2.31	2.12	1.188	O				5.06
13.750	2.35	2.15	1.190	O				5.07
13.833	2.39	2.18	1.191	O				5.08

13.917	2.43	2.21	1.193	O				5.09
14.000	2.48	2.25	1.194	O				5.11
14.083	2.52	2.29	1.196	O				5.12
14.167	2.58	2.32	1.197	O				5.13
14.250	2.63	2.36	1.199	O				5.15
14.333	2.69	2.41	1.201	O				5.16
14.417	2.75	2.45	1.203	O				5.18
14.500	2.82	2.50	1.205	O				5.19
14.583	2.89	2.55	1.208	O				5.21
14.667	2.97	2.61	1.210	O				5.23
14.750	3.05	2.67	1.213	O				5.25
14.833	3.15	2.73	1.215	OI				5.27
14.917	3.24	2.80	1.218	OI				5.29
15.000	3.36	2.87	1.222	OI				5.32
15.083	3.48	2.95	1.225	OI				5.35
15.167	3.63	3.04	1.229	OI				5.38
15.250	3.78	3.13	1.233	O				5.41
15.333	3.97	3.24	1.238	O				5.44
15.417	4.04	3.35	1.243	O				5.48
15.500	3.77	3.41	1.246	O				5.51
15.583	3.80	3.42	1.249	O				5.52
15.667	4.17	3.43	1.253	OI				5.53
15.750	4.62	3.46	1.259	OI				5.56
15.833	5.35	3.49	1.270	O I				5.60
15.917	6.47	3.55	1.286	O I				5.67
16.000	9.20	3.66	1.315	O I				5.78
16.083	17.29	3.90	1.380	O	I			6.04
16.167	33.01	4.41	1.525	O			I	6.64
16.250	18.21	4.88	1.669	O	I			7.26
16.333	7.11	5.06	1.722	O I				7.49
16.417	4.77	5.08	1.728	O				7.52
16.500	4.24	5.06	1.724	O				7.50
16.583	3.98	5.04	1.718	IO				7.47
16.667	3.66	5.02	1.710	IO				7.44
16.750	3.39	4.98	1.700	IO				7.39
16.833	3.17	4.95	1.688	IO				7.34
16.917	2.99	4.90	1.675	I O				7.29
17.000	2.83	4.86	1.662	I O				7.23
17.083	2.70	4.81	1.647	I O				7.17
17.167	2.59	4.77	1.633	I O				7.10
17.250	2.49	4.72	1.617	I O				7.04
17.333	2.40	4.67	1.602	I O				6.97
17.417	2.32	4.61	1.586	I O				6.90
17.500	2.24	4.56	1.570	I O				6.83
17.583	2.18	4.51	1.554	I O				6.76
17.667	2.12	4.46	1.538	I O				6.69
17.750	2.06	4.41	1.522	I O				6.62
17.833	2.01	4.35	1.506	I O				6.55
17.917	1.96	4.30	1.490	I O				6.48
18.000	1.92	4.24	1.474	I O				6.42

18.083	1.87	4.18	1.458	I O				6.35
18.167	1.83	4.12	1.442	I O				6.29
18.250	1.79	4.07	1.426	I O				6.23
18.333	1.76	4.01	1.411	I O				6.17
18.417	1.73	3.95	1.395	I O				6.10
18.500	1.69	3.90	1.380	I O				6.04
18.583	1.67	3.84	1.365	I O				5.98
18.667	1.64	3.79	1.350	I O				5.92
18.750	1.61	3.73	1.335	I O				5.86
18.833	1.59	3.68	1.321	I O				5.80
18.917	1.56	3.63	1.306	I O				5.75
19.000	1.54	3.58	1.292	I O				5.69
19.083	1.52	3.53	1.278	I O				5.63
19.167	1.50	3.48	1.265	I O				5.58
19.250	1.48	3.43	1.251	I O				5.52
19.333	1.46	3.25	1.238	I O				5.45
19.417	1.44	2.99	1.227	IO				5.36
19.500	1.42	2.76	1.217	IO				5.28
19.583	1.40	2.57	1.208	IO				5.21
19.667	1.39	2.40	1.201	IO				5.16
19.750	1.37	2.25	1.194	IO				5.11
19.833	1.36	2.12	1.189	IO				5.06
19.917	1.34	2.01	1.184	O				5.02
20.000	1.33	1.91	1.179	O				4.99
20.083	1.31	1.82	1.175	O				4.96
20.167	1.30	1.75	1.172	O				4.94
20.250	1.29	1.68	1.169	O				4.91
20.333	1.27	1.62	1.167	O				4.89
20.417	1.26	1.57	1.164	O				4.88
20.500	1.25	1.53	1.162	O				4.86
20.583	1.24	1.48	1.161	O				4.85
20.667	1.22	1.45	1.159	O				4.83
20.750	1.21	1.41	1.157	O				4.82
20.833	1.20	1.38	1.156	O				4.81
20.917	1.19	1.36	1.155	O				4.80
21.000	1.18	1.33	1.154	O				4.79
21.083	1.17	1.31	1.153	O				4.79
21.167	1.16	1.29	1.152	O				4.78
21.250	1.15	1.27	1.151	O				4.77
21.333	1.14	1.25	1.150	O				4.77
21.417	1.14	1.24	1.150	O				4.76
21.500	1.13	1.22	1.149	O				4.76
21.583	1.12	1.21	1.148	O				4.75
21.667	1.11	1.19	1.148	O				4.75
21.750	1.10	1.18	1.147	O				4.74
21.833	1.09	1.17	1.147	O				4.74
21.917	1.09	1.16	1.146	O				4.73
22.000	1.08	1.15	1.146	O				4.73
22.083	1.07	1.14	1.145	O				4.73
22.167	1.06	1.13	1.145	O				4.72

22.250	1.06	1.12	1.144	|O	|	|	|	4.72
22.333	1.05	1.11	1.144	|O	|	|	|	4.72
22.417	1.04	1.10	1.144	|O	|	|	|	4.71
22.500	1.03	1.09	1.143	|O	|	|	|	4.71
22.583	1.03	1.08	1.143	IO	|	|	|	4.71
22.667	1.02	1.07	1.142	IO	|	|	|	4.70
22.750	1.01	1.06	1.142	IO	|	|	|	4.70
22.833	1.01	1.06	1.142	IO	|	|	|	4.70
22.917	1.00	1.05	1.141	IO	|	|	|	4.70
23.000	1.00	1.04	1.141	IO	|	|	|	4.69
23.083	0.99	1.04	1.141	IO	|	|	|	4.69
23.167	0.98	1.03	1.140	O	|	|	|	4.69
23.250	0.98	1.02	1.140	O	|	|	|	4.69
23.333	0.97	1.01	1.140	O	|	|	|	4.69
23.417	0.97	1.01	1.140	O	|	|	|	4.68
23.500	0.96	1.00	1.139	O	|	|	|	4.68
23.583	0.96	1.00	1.139	O	|	|	|	4.68
23.667	0.95	0.99	1.139	O	|	|	|	4.68
23.750	0.95	0.98	1.139	O	|	|	|	4.67
23.833	0.94	0.98	1.138	O	|	|	|	4.67
23.917	0.94	0.97	1.138	O	|	|	|	4.67
24.000	0.93	0.97	1.138	O	|	|	|	4.67
24.083	0.81	0.95	1.137	O	|	|	|	4.66
24.167	0.28	0.89	1.135	O	|	|	|	4.64
24.250	0.04	0.79	1.130	O	|	|	|	4.61
24.333	0.01	0.68	1.125	O	|	|	|	4.57
24.417	0.00	0.58	1.121	O	|	|	|	4.54
24.500	0.00	0.49	1.117	O	|	|	|	4.51
24.583	0.00	0.47	1.114	O	|	|	|	4.50
24.667	0.00	0.46	1.110	O	|	|	|	4.49
24.750	0.00	0.45	1.107	O	|	|	|	4.49
24.833	0.00	0.45	1.104	O	|	|	|	4.48
24.917	0.00	0.44	1.101	O	|	|	|	4.48
25.000	0.00	0.43	1.098	O	|	|	|	4.47
25.083	0.00	0.42	1.095	O	|	|	|	4.47
25.167	0.00	0.42	1.092	O	|	|	|	4.47
25.250	0.00	0.41	1.090	O	|	|	|	4.46
25.333	0.00	0.41	1.087	O	|	|	|	4.46
25.417	0.00	0.40	1.084	O	|	|	|	4.45
25.500	0.00	0.39	1.081	O	|	|	|	4.45
25.583	0.00	0.39	1.079	O	|	|	|	4.45
25.667	0.00	0.38	1.076	O	|	|	|	4.44
25.750	0.00	0.37	1.073	O	|	|	|	4.44
25.833	0.00	0.37	1.071	O	|	|	|	4.43
25.917	0.00	0.36	1.068	O	|	|	|	4.43
26.000	0.00	0.36	1.066	O	|	|	|	4.43
26.083	0.00	0.35	1.063	O	|	|	|	4.42
26.167	0.00	0.35	1.061	O	|	|	|	4.42
26.250	0.00	0.34	1.059	O	|	|	|	4.42
26.333	0.00	0.34	1.056	O	|	|	|	4.41

26.417	0.00	0.33	1.054	O	|	|	|	4.41
26.500	0.00	0.33	1.052	O	|	|	|	4.41
26.583	0.00	0.32	1.049	O	|	|	|	4.40
26.667	0.00	0.32	1.047	O	|	|	|	4.40
26.750	0.00	0.31	1.045	O	|	|	|	4.40
26.833	0.00	0.31	1.043	O	|	|	|	4.39
26.917	0.00	0.30	1.041	O	|	|	|	4.39
27.000	0.00	0.30	1.039	O	|	|	|	4.39
27.083	0.00	0.29	1.037	O	|	|	|	4.39
27.167	0.00	0.29	1.035	O	|	|	|	4.38
27.250	0.00	0.28	1.033	O	|	|	|	4.38
27.333	0.00	0.28	1.031	O	|	|	|	4.38
27.417	0.00	0.27	1.029	O	|	|	|	4.37
27.500	0.00	0.27	1.027	O	|	|	|	4.37
27.583	0.00	0.27	1.025	O	|	|	|	4.37
27.667	0.00	0.26	1.023	O	|	|	|	4.37
27.750	0.00	0.26	1.022	O	|	|	|	4.36
27.833	0.00	0.25	1.020	O	|	|	|	4.36
27.917	0.00	0.25	1.018	O	|	|	|	4.36
28.000	0.00	0.25	1.017	O	|	|	|	4.36
28.083	0.00	0.24	1.015	O	|	|	|	4.35
28.167	0.00	0.24	1.013	O	|	|	|	4.35
28.250	0.00	0.23	1.012	O	|	|	|	4.35
28.333	0.00	0.23	1.010	O	|	|	|	4.35
28.417	0.00	0.23	1.008	O	|	|	|	4.34
28.500	0.00	0.22	1.007	O	|	|	|	4.34
28.583	0.00	0.22	1.005	O	|	|	|	4.34
28.667	0.00	0.22	1.004	O	|	|	|	4.34
28.750	0.00	0.21	1.002	O	|	|	|	4.34
28.833	0.00	0.21	1.001	O	|	|	|	4.33
28.917	0.00	0.21	0.999	O	|	|	|	4.33
29.000	0.00	0.20	0.998	O	|	|	|	4.33
29.083	0.00	0.20	0.997	O	|	|	|	4.33
29.167	0.00	0.20	0.995	O	|	|	|	4.33
29.250	0.00	0.19	0.994	O	|	|	|	4.32
29.333	0.00	0.19	0.993	O	|	|	|	4.32
29.417	0.00	0.19	0.991	O	|	|	|	4.32
29.500	0.00	0.18	0.990	O	|	|	|	4.32
29.583	0.00	0.18	0.989	O	|	|	|	4.32
29.667	0.00	0.18	0.988	O	|	|	|	4.31
29.750	0.00	0.18	0.986	O	|	|	|	4.31
29.833	0.00	0.17	0.985	O	|	|	|	4.31
29.917	0.00	0.17	0.984	O	|	|	|	4.31
30.000	0.00	0.17	0.983	O	|	|	|	4.31
30.083	0.00	0.17	0.982	O	|	|	|	4.31
30.167	0.00	0.16	0.980	O	|	|	|	4.30
30.250	0.00	0.16	0.979	O	|	|	|	4.30
30.333	0.00	0.16	0.978	O	|	|	|	4.30
30.417	0.00	0.16	0.977	O	|	|	|	4.30
30.500	0.00	0.15	0.976	O	|	|	|	4.30

30.583	0.00	0.15	0.975	O				4.30
30.667	0.00	0.15	0.974	O				4.29
30.750	0.00	0.15	0.973	O				4.29
30.833	0.00	0.14	0.972	O				4.29
30.917	0.00	0.14	0.971	O				4.29
31.000	0.00	0.14	0.970	O				4.29
31.083	0.00	0.14	0.969	O				4.29
31.167	0.00	0.13	0.968	O				4.29
31.250	0.00	0.13	0.967	O				4.28
31.333	0.00	0.13	0.966	O				4.28
31.417	0.00	0.13	0.965	O				4.28
31.500	0.00	0.13	0.965	O				4.28
31.583	0.00	0.12	0.964	O				4.28
31.667	0.00	0.12	0.963	O				4.28
31.750	0.00	0.12	0.962	O				4.28
31.833	0.00	0.12	0.961	O				4.28
31.917	0.00	0.12	0.960	O				4.27
32.000	0.00	0.12	0.960	O				4.27
32.083	0.00	0.11	0.959	O				4.27
32.167	0.00	0.11	0.958	O				4.27
32.250	0.00	0.11	0.957	O				4.27
32.333	0.00	0.11	0.957	O				4.27
32.417	0.00	0.11	0.956	O				4.27
32.500	0.00	0.10	0.955	O				4.27
32.583	0.00	0.10	0.954	O				4.27
32.667	0.00	0.10	0.954	O				4.26
32.750	0.00	0.10	0.953	O				4.26
32.833	0.00	0.10	0.952	O				4.26
32.917	0.00	0.10	0.952	O				4.26
33.000	0.00	0.10	0.951	O				4.26
33.083	0.00	0.09	0.950	O				4.26
33.167	0.00	0.09	0.950	O				4.26
33.250	0.00	0.09	0.949	O				4.26
33.333	0.00	0.09	0.948	O				4.26
33.417	0.00	0.09	0.948	O				4.26
33.500	0.00	0.09	0.947	O				4.26
33.583	0.00	0.09	0.947	O				4.25
33.667	0.00	0.08	0.946	O				4.25
33.750	0.00	0.08	0.945	O				4.25
33.833	0.00	0.08	0.945	O				4.25
33.917	0.00	0.08	0.944	O				4.25
34.000	0.00	0.08	0.944	O				4.25
34.083	0.00	0.08	0.943	O				4.25
34.167	0.00	0.08	0.943	O				4.25
34.250	0.00	0.08	0.942	O				4.25
34.333	0.00	0.07	0.942	O				4.25
34.417	0.00	0.07	0.941	O				4.25
34.500	0.00	0.07	0.941	O				4.25
34.583	0.00	0.07	0.940	O				4.25
34.667	0.00	0.07	0.940	O				4.24

34.750	0.00	0.07	0.939	O				4.24
34.833	0.00	0.07	0.939	O				4.24
34.917	0.00	0.07	0.938	O				4.24
35.000	0.00	0.07	0.938	O				4.24
35.083	0.00	0.06	0.937	O				4.24
35.167	0.00	0.06	0.937	O				4.24
35.250	0.00	0.06	0.936	O				4.24
35.333	0.00	0.06	0.936	O				4.24
35.417	0.00	0.06	0.936	O				4.24
35.500	0.00	0.06	0.935	O				4.24
35.583	0.00	0.06	0.935	O				4.24
35.667	0.00	0.06	0.934	O				4.24
35.750	0.00	0.06	0.934	O				4.24
35.833	0.00	0.06	0.934	O				4.24
35.917	0.00	0.06	0.933	O				4.24
36.000	0.00	0.05	0.933	O				4.23
36.083	0.00	0.05	0.932	O				4.23
36.167	0.00	0.05	0.932	O				4.23
36.250	0.00	0.05	0.932	O				4.23
36.333	0.00	0.05	0.931	O				4.23
36.417	0.00	0.05	0.931	O				4.23
36.500	0.00	0.05	0.931	O				4.23
36.583	0.00	0.05	0.930	O				4.23
36.667	0.00	0.05	0.930	O				4.23
36.750	0.00	0.05	0.930	O				4.23
36.833	0.00	0.05	0.929	O				4.23
36.917	0.00	0.05	0.929	O				4.23
37.000	0.00	0.04	0.929	O				4.23
37.083	0.00	0.04	0.928	O				4.23
37.167	0.00	0.04	0.928	O				4.23
37.250	0.00	0.04	0.928	O				4.23
37.333	0.00	0.04	0.928	O				4.23
37.417	0.00	0.04	0.927	O				4.23
37.500	0.00	0.04	0.927	O				4.23
37.583	0.00	0.04	0.927	O				4.23
37.667	0.00	0.04	0.926	O				4.23
37.750	0.00	0.04	0.926	O				4.22
37.833	0.00	0.04	0.926	O				4.22
37.917	0.00	0.04	0.926	O				4.22
38.000	0.00	0.04	0.925	O				4.22
38.083	0.00	0.04	0.925	O				4.22
38.167	0.00	0.04	0.925	O				4.22
38.250	0.00	0.04	0.925	O				4.22
38.333	0.00	0.03	0.924	O				4.22
38.417	0.00	0.03	0.924	O				4.22
38.500	0.00	0.03	0.924	O				4.22
38.583	0.00	0.03	0.924	O				4.22
38.667	0.00	0.03	0.923	O				4.22
38.750	0.00	0.03	0.923	O				4.22
38.833	0.00	0.03	0.923	O				4.22

38.917	0.00	0.03	0.923	O				4.22
39.000	0.00	0.03	0.923	O				4.22
39.083	0.00	0.03	0.922	O				4.22
39.167	0.00	0.03	0.922	O				4.22
39.250	0.00	0.03	0.922	O				4.22
39.333	0.00	0.03	0.922	O				4.22
39.417	0.00	0.03	0.922	O				4.22
39.500	0.00	0.03	0.921	O				4.22
39.583	0.00	0.03	0.921	O				4.22
39.667	0.00	0.03	0.921	O				4.22
39.750	0.00	0.03	0.921	O				4.22
39.833	0.00	0.03	0.921	O				4.22
39.917	0.00	0.03	0.920	O				4.22
40.000	0.00	0.03	0.920	O				4.22
40.083	0.00	0.03	0.920	O				4.22
40.167	0.00	0.02	0.920	O				4.22
40.250	0.00	0.02	0.920	O				4.22
40.333	0.00	0.02	0.920	O				4.22
40.417	0.00	0.02	0.919	O				4.22
40.500	0.00	0.02	0.919	O				4.21
40.583	0.00	0.02	0.919	O				4.21
40.667	0.00	0.02	0.919	O				4.21
40.750	0.00	0.02	0.919	O				4.21
40.833	0.00	0.02	0.919	O				4.21
40.917	0.00	0.02	0.918	O				4.21
41.000	0.00	0.02	0.918	O				4.21
41.083	0.00	0.02	0.918	O				4.21
41.167	0.00	0.02	0.918	O				4.21
41.250	0.00	0.02	0.918	O				4.21
41.333	0.00	0.02	0.918	O				4.21
41.417	0.00	0.02	0.918	O				4.21
41.500	0.00	0.02	0.917	O				4.21
41.583	0.00	0.02	0.917	O				4.21
41.667	0.00	0.02	0.917	O				4.21
41.750	0.00	0.02	0.917	O				4.21
41.833	0.00	0.02	0.917	O				4.21
41.917	0.00	0.02	0.917	O				4.21
42.000	0.00	0.02	0.917	O				4.21
42.083	0.00	0.02	0.917	O				4.21
42.167	0.00	0.02	0.916	O				4.21
42.250	0.00	0.02	0.916	O				4.21
42.333	0.00	0.02	0.916	O				4.21
42.417	0.00	0.02	0.916	O				4.21
42.500	0.00	0.02	0.916	O				4.21
42.583	0.00	0.02	0.916	O				4.21
42.667	0.00	0.02	0.916	O				4.21
42.750	0.00	0.02	0.916	O				4.21
42.833	0.00	0.01	0.916	O				4.21
42.917	0.00	0.01	0.915	O				4.21
43.000	0.00	0.01	0.915	O				4.21

43.083	0.00	0.01	0.915	O				4.21
43.167	0.00	0.01	0.915	O				4.21
43.250	0.00	0.01	0.915	O				4.21
43.333	0.00	0.01	0.915	O				4.21
43.417	0.00	0.01	0.915	O				4.21
43.500	0.00	0.01	0.915	O				4.21
43.583	0.00	0.01	0.915	O				4.21
43.667	0.00	0.01	0.915	O				4.21
43.750	0.00	0.01	0.915	O				4.21
43.833	0.00	0.01	0.914	O				4.21
43.917	0.00	0.01	0.914	O				4.21
44.000	0.00	0.01	0.914	O				4.21
44.083	0.00	0.01	0.914	O				4.21
44.167	0.00	0.01	0.914	O				4.21
44.250	0.00	0.01	0.914	O				4.21
44.333	0.00	0.01	0.914	O				4.21
44.417	0.00	0.01	0.914	O				4.21
44.500	0.00	0.01	0.914	O				4.21
44.583	0.00	0.01	0.914	O				4.21
44.667	0.00	0.01	0.914	O				4.21
44.750	0.00	0.01	0.914	O				4.21
44.833	0.00	0.01	0.914	O				4.21
44.917	0.00	0.01	0.913	O				4.21
45.000	0.00	0.01	0.913	O				4.21
45.083	0.00	0.01	0.913	O				4.21
45.167	0.00	0.01	0.913	O				4.21
45.250	0.00	0.01	0.913	O				4.21
45.333	0.00	0.01	0.913	O				4.21
45.417	0.00	0.01	0.913	O				4.21
45.500	0.00	0.01	0.913	O				4.21
45.583	0.00	0.01	0.913	O				4.21
45.667	0.00	0.01	0.913	O				4.21
45.750	0.00	0.01	0.913	O				4.21
45.833	0.00	0.01	0.913	O				4.21
45.917	0.00	0.01	0.913	O				4.21
46.000	0.00	0.01	0.913	O				4.21
46.083	0.00	0.01	0.913	O				4.21
46.167	0.00	0.01	0.913	O				4.21
46.250	0.00	0.01	0.912	O				4.21
46.333	0.00	0.01	0.912	O				4.20
46.417	0.00	0.01	0.912	O				4.20
46.500	0.00	0.01	0.912	O				4.20
46.583	0.00	0.01	0.912	O				4.20
46.667	0.00	0.01	0.912	O				4.20
46.750	0.00	0.01	0.912	O				4.20
46.833	0.00	0.01	0.912	O				4.20
46.917	0.00	0.01	0.912	O				4.20
47.000	0.00	0.01	0.912	O				4.20
47.083	0.00	0.01	0.912	O				4.20
47.167	0.00	0.01	0.912	O				4.20

47.250	0.00	0.01	0.912	O				4.20
47.333	0.00	0.01	0.912	O				4.20
47.417	0.00	0.01	0.912	O				4.20
47.500	0.00	0.01	0.912	O				4.20
47.583	0.00	0.01	0.912	O				4.20
47.667	0.00	0.01	0.912	O				4.20
47.750	0.00	0.01	0.912	O				4.20
47.833	0.00	0.01	0.912	O				4.20
47.917	0.00	0.01	0.912	O				4.20
48.000	0.00	0.01	0.911	O				4.20
48.083	0.00	0.01	0.911	O				4.20
48.167	0.00	0.01	0.911	O				4.20
48.250	0.00	0.01	0.911	O				4.20
48.333	0.00	0.01	0.911	O				4.20
48.417	0.00	0.01	0.911	O				4.20
48.500	0.00	0.01	0.911	O				4.20
48.583	0.00	0.01	0.911	O				4.20
48.667	0.00	0.00	0.911	O				4.20
48.750	0.00	0.00	0.911	O				4.20
48.833	0.00	0.00	0.911	O				4.20
48.917	0.00	0.00	0.911	O				4.20
49.000	0.00	0.00	0.911	O				4.20
49.083	0.00	0.00	0.911	O				4.20
49.167	0.00	0.00	0.911	O				4.20
49.250	0.00	0.00	0.911	O				4.20
49.333	0.00	0.00	0.911	O				4.20
49.417	0.00	0.00	0.911	O				4.20
49.500	0.00	0.00	0.911	O				4.20
49.583	0.00	0.00	0.911	O				4.20
49.667	0.00	0.00	0.911	O				4.20
49.750	0.00	0.00	0.911	O				4.20
49.833	0.00	0.00	0.911	O				4.20
49.917	0.00	0.00	0.911	O				4.20
50.000	0.00	0.00	0.911	O				4.20
50.083	0.00	0.00	0.911	O				4.20
50.167	0.00	0.00	0.911	O				4.20
50.250	0.00	0.00	0.911	O				4.20
50.333	0.00	0.00	0.911	O				4.20
50.417	0.00	0.00	0.911	O				4.20
50.500	0.00	0.00	0.911	O				4.20
50.583	0.00	0.00	0.911	O				4.20
50.667	0.00	0.00	0.911	O				4.20
50.750	0.00	0.00	0.910	O				4.20
50.833	0.00	0.00	0.910	O				4.20
50.917	0.00	0.00	0.910	O				4.20
51.000	0.00	0.00	0.910	O				4.20
51.083	0.00	0.00	0.910	O				4.20
51.167	0.00	0.00	0.910	O				4.20
51.250	0.00	0.00	0.910	O				4.20
51.333	0.00	0.00	0.910	O				4.20

51.417	0.00	0.00	0.910	O	|	|	|	4.20
51.500	0.00	0.00	0.910	O	|	|	|	4.20
51.583	0.00	0.00	0.910	O	|	|	|	4.20
51.667	0.00	0.00	0.910	O	|	|	|	4.20
51.750	0.00	0.00	0.910	O	|	|	|	4.20
51.833	0.00	0.00	0.910	O	|	|	|	4.20
51.917	0.00	0.00	0.910	O	|	|	|	4.20
52.000	0.00	0.00	0.910	O	|	|	|	4.20
52.083	0.00	0.00	0.910	O	|	|	|	4.20
52.167	0.00	0.00	0.910	O	|	|	|	4.20
52.250	0.00	0.00	0.910	O	|	|	|	4.20
52.333	0.00	0.00	0.910	O	|	|	|	4.20
52.417	0.00	0.00	0.910	O	|	|	|	4.20
52.500	0.00	0.00	0.910	O	|	|	|	4.20
52.583	0.00	0.00	0.910	O	|	|	|	4.20
52.667	0.00	0.00	0.910	O	|	|	|	4.20
52.750	0.00	0.00	0.910	O	|	|	|	4.20
52.833	0.00	0.00	0.910	O	|	|	|	4.20
52.917	0.00	0.00	0.910	O	|	|	|	4.20
53.000	0.00	0.00	0.910	O	|	|	|	4.20
53.083	0.00	0.00	0.910	O	|	|	|	4.20
53.167	0.00	0.00	0.910	O	|	|	|	4.20
53.250	0.00	0.00	0.910	O	|	|	|	4.20
53.333	0.00	0.00	0.910	O	|	|	|	4.20
53.417	0.00	0.00	0.910	O	|	|	|	4.20
53.500	0.00	0.00	0.910	O	|	|	|	4.20
53.583	0.00	0.00	0.910	O	|	|	|	4.20
53.667	0.00	0.00	0.910	O	|	|	|	4.20
53.750	0.00	0.00	0.910	O	|	|	|	4.20
53.833	0.00	0.00	0.910	O	|	|	|	4.20
53.917	0.00	0.00	0.910	O	|	|	|	4.20
54.000	0.00	0.00	0.910	O	|	|	|	4.20
54.083	0.00	0.00	0.910	O	|	|	|	4.20
54.167	0.00	0.00	0.910	O	|	|	|	4.20
54.250	0.00	0.00	0.910	O	|	|	|	4.20
54.333	0.00	0.00	0.910	O	|	|	|	4.20
54.417	0.00	0.00	0.910	O	|	|	|	4.20
54.500	0.00	0.00	0.910	O	|	|	|	4.20
54.583	0.00	0.00	0.910	O	|	|	|	4.20
54.667	0.00	0.00	0.910	O	|	|	|	4.20
54.750	0.00	0.00	0.910	O	|	|	|	4.20
54.833	0.00	0.00	0.910	O	|	|	|	4.20
54.917	0.00	0.00	0.910	O	|	|	|	4.20
55.000	0.00	0.00	0.910	O	|	|	|	4.20
55.083	0.00	0.00	0.910	O	|	|	|	4.20
55.167	0.00	0.00	0.910	O	|	|	|	4.20
55.250	0.00	0.00	0.910	O	|	|	|	4.20
55.333	0.00	0.00	0.910	O	|	|	|	4.20
55.417	0.00	0.00	0.910	O	|	|	|	4.20
55.500	0.00	0.00	0.910	O	|	|	|	4.20

55.583	0.00	0.00	0.910	O	|	|	|	4.20
55.667	0.00	0.00	0.910	O	|	|	|	4.20
55.750	0.00	0.00	0.910	O	|	|	|	4.20
55.833	0.00	0.00	0.910	O	|	|	|	4.20
55.917	0.00	0.00	0.910	O	|	|	|	4.20
56.000	0.00	0.00	0.910	O	|	|	|	4.20
56.083	0.00	0.00	0.910	O	|	|	|	4.20
56.167	0.00	0.00	0.910	O	|	|	|	4.20
56.250	0.00	0.00	0.910	O	|	|	|	4.20
56.333	0.00	0.00	0.910	O	|	|	|	4.20
56.417	0.00	0.00	0.910	O	|	|	|	4.20
56.500	0.00	0.00	0.910	O	|	|	|	4.20
56.583	0.00	0.00	0.909	O	|	|	|	4.20
56.667	0.00	0.00	0.909	O	|	|	|	4.20
56.750	0.00	0.00	0.909	O	|	|	|	4.20
56.833	0.00	0.00	0.909	O	|	|	|	4.20
56.917	0.00	0.00	0.909	O	|	|	|	4.20
57.000	0.00	0.00	0.909	O	|	|	|	4.20
57.083	0.00	0.00	0.909	O	|	|	|	4.20
57.167	0.00	0.00	0.909	O	|	|	|	4.20
57.250	0.00	0.00	0.909	O	|	|	|	4.20

**********HYDROGRAPH DATA**********

Number of intervals = 687
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5.078 (CFS)
Total volume = 3.700 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018
Study date: 08/15/22

204742 Route 66 Truck Terminal LLC Foothill Blvd SB
ROUTE AREA "A"
100-YEAR, 24-HOUR STORM
BY: FA DATE: 08-15-22

Program License Serial Number 6320

********** HYDROGRAPH INFORMATION **********

From study/file name: devhyda100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 41.435 (CFS)
Total volume = 5.040 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 3.000 to Point/Station 6.000
**** RETARDING BASIN ROUTING ****
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Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))
Total outflow at this depth = 0.00(CFS)

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CALCULATED OUTFLOW DATA AT DEPTH =    1.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.20(Ft.))
Total outflow at this depth =      0.00(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
Calculated individual pipe flow  =     0.472(CFS)
Normal flow depth in pipe =    3.05(In.)
Flow top width inside pipe =    9.21(In.)
Critical Depth =    0.30(Ft.)
Calculated flow rate through pipe(s) =      0.472(CFS)

Total outflow at this depth =      0.47(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.650(Ft.)
Pipe friction loss =      0.741(Ft.)
Minor friction loss =      0.907(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      3.404(CFS)

Total outflow at this depth =      3.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    6.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
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The total friction loss through the pipe is      2.650(Ft.)
Pipe friction loss =      1.190(Ft.)
Minor friction loss =      1.457(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      4.314(CFS)

Total outflow at this depth =      4.31(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    7.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.650(Ft.)
Pipe friction loss =      1.640(Ft.)
Minor friction loss =      2.007(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.063(CFS)

Total outflow at this depth =      5.06(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    8.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      4.650(Ft.)
Pipe friction loss =      2.089(Ft.)
Minor friction loss =      2.557(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      5.714(CFS)

Total outflow at this depth =      5.71(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    9.50(Ft.))
Pipe length  =    30.71(Ft.)   Elevation difference =   0.35(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =     10.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      5.650(Ft.)
Pipe friction loss =      2.538(Ft.)
Minor friction loss =      3.106(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      6.299(CFS)

Total outflow at this depth =      6.30(CFS)

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Total number of inflow hydrograph intervals = 292
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 4.20(Ft.)

Initial basin depth = 4.20 (Ft.)
Initial basin storage = 0.91 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.063	0.000	0.063	0.063
1.500	0.249	0.000	0.249	0.249
2.500	0.479	0.000	0.479	0.479
3.500	0.857	0.000	0.857	0.857
4.200	0.909	0.000	0.909	0.909
4.500	1.116	0.472	1.114	1.118
5.500	1.245	3.404	1.233	1.257
6.500	1.494	4.314	1.479	1.509
7.500	1.724	5.063	1.707	1.741
8.500	1.910	5.714	1.890	1.930
9.500	2.036	6.299	2.014	2.058

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 10.4 20.72 31.08 41.44	Depth (Ft.)
0.083	0.18	0.00	0.910	O | | | |	4.20
0.167	0.93	0.01	0.913	O | | | |	4.21
0.250	1.28	0.03	0.921	O | | | |	4.22
0.333	1.32	0.05	0.930	OI | | | |	4.23
0.417	1.34	0.07	0.938	OI | | | |	4.24
0.500	1.34	0.09	0.947	OI | | | |	4.26
0.583	1.34	0.11	0.956	OI | | | |	4.27
0.667	1.35	0.13	0.964	OI | | | |	4.28
0.750	1.35	0.14	0.972	OI | | | |	4.29
0.833	1.35	0.16	0.981	OI | | | |	4.30
0.917	1.36	0.18	0.989	OI | | | |	4.32
1.000	1.36	0.20	0.997	OI | | | |	4.33
1.083	1.36	0.22	1.005	OI | | | |	4.34
1.167	1.37	0.24	1.013	OI | | | |	4.35
1.250	1.37	0.25	1.020	OI | | | |	4.36
1.333	1.38	0.27	1.028	OI | | | |	4.37

1.417	1.38	0.29	1.036	OI				4.38
1.500	1.38	0.31	1.043	OI				4.39
1.583	1.39	0.32	1.050	OI				4.41
1.667	1.39	0.34	1.058	OI				4.42
1.750	1.39	0.36	1.065	OI				4.43
1.833	1.40	0.37	1.072	OI				4.44
1.917	1.40	0.39	1.079	OI				4.45
2.000	1.41	0.40	1.086	OI				4.46
2.083	1.41	0.42	1.093	OI				4.47
2.167	1.41	0.43	1.100	OI				4.48
2.250	1.42	0.45	1.106	OI				4.49
2.333	1.42	0.47	1.113	OI				4.50
2.417	1.43	0.55	1.119	OI				4.53
2.500	1.43	0.67	1.125	OI				4.57
2.583	1.43	0.78	1.130	OI				4.61
2.667	1.44	0.88	1.134	OI				4.64
2.750	1.44	0.96	1.137	OI				4.67
2.833	1.45	1.03	1.141	OI				4.69
2.917	1.45	1.09	1.143	OI				4.71
3.000	1.45	1.14	1.146	OI				4.73
3.083	1.46	1.19	1.148	OI				4.74
3.167	1.46	1.23	1.149	OI				4.76
3.250	1.47	1.26	1.151	OI				4.77
3.333	1.47	1.29	1.152	OI				4.78
3.417	1.48	1.32	1.153	|O				4.79
3.500	1.48	1.34	1.154	|O				4.80
3.583	1.49	1.36	1.155	|O				4.80
3.667	1.49	1.38	1.156	|O				4.81
3.750	1.49	1.40	1.157	|O				4.82
3.833	1.50	1.41	1.157	|O				4.82
3.917	1.50	1.42	1.158	|O				4.82
4.000	1.51	1.44	1.158	|O				4.83
4.083	1.51	1.45	1.159	|O				4.83
4.167	1.52	1.46	1.159	|O				4.84
4.250	1.52	1.47	1.160	|O				4.84
4.333	1.53	1.48	1.160	|O				4.84
4.417	1.53	1.48	1.161	|O				4.85
4.500	1.54	1.49	1.161	|O				4.85
4.583	1.54	1.50	1.161	|O				4.85
4.667	1.55	1.51	1.161	|O				4.85
4.750	1.55	1.51	1.162	|O				4.85
4.833	1.56	1.52	1.162	|O				4.86
4.917	1.57	1.53	1.162	|O				4.86
5.000	1.57	1.53	1.163	|O				4.86
5.083	1.58	1.54	1.163	|O				4.86
5.167	1.58	1.54	1.163	|O				4.87
5.250	1.59	1.55	1.163	|O				4.87
5.333	1.59	1.56	1.164	|O				4.87
5.417	1.60	1.56	1.164	|O				4.87
5.500	1.60	1.57	1.164	|O				4.87

5.583	1.61	1.57	1.164	0				4.88
5.667	1.62	1.58	1.165	0				4.88
5.750	1.62	1.58	1.165	0				4.88
5.833	1.63	1.59	1.165	0				4.88
5.917	1.63	1.60	1.165	0				4.88
6.000	1.64	1.60	1.166	0				4.89
6.083	1.65	1.61	1.166	0				4.89
6.167	1.65	1.61	1.166	0				4.89
6.250	1.66	1.62	1.167	0				4.89
6.333	1.67	1.63	1.167	0				4.89
6.417	1.67	1.63	1.167	0				4.90
6.500	1.68	1.64	1.167	0				4.90
6.583	1.69	1.65	1.168	0				4.90
6.667	1.69	1.65	1.168	0				4.90
6.750	1.70	1.66	1.168	0				4.90
6.833	1.71	1.67	1.169	0				4.91
6.917	1.72	1.67	1.169	0				4.91
7.000	1.72	1.68	1.169	0				4.91
7.083	1.73	1.69	1.169	0				4.91
7.167	1.74	1.69	1.170	0				4.92
7.250	1.74	1.70	1.170	0				4.92
7.333	1.75	1.71	1.170	0				4.92
7.417	1.76	1.71	1.171	0				4.92
7.500	1.77	1.72	1.171	0				4.93
7.583	1.78	1.73	1.171	0				4.93
7.667	1.78	1.74	1.172	0				4.93
7.750	1.79	1.74	1.172	0				4.93
7.833	1.80	1.75	1.172	0				4.94
7.917	1.81	1.76	1.173	0				4.94
8.000	1.82	1.77	1.173	0				4.94
8.083	1.83	1.78	1.173	0				4.94
8.167	1.84	1.78	1.174	0				4.95
8.250	1.84	1.79	1.174	0				4.95
8.333	1.85	1.80	1.174	0				4.95
8.417	1.86	1.81	1.175	0				4.96
8.500	1.87	1.82	1.175	0				4.96
8.583	1.88	1.83	1.176	0				4.96
8.667	1.89	1.83	1.176	0				4.96
8.750	1.90	1.84	1.176	0				4.97
8.833	1.91	1.85	1.177	0				4.97
8.917	1.92	1.86	1.177	0				4.97
9.000	1.93	1.87	1.178	0				4.98
9.083	1.94	1.88	1.178	0				4.98
9.167	1.95	1.89	1.178	0				4.98
9.250	1.96	1.90	1.179	0				4.99
9.333	1.98	1.91	1.179	0				4.99
9.417	1.99	1.92	1.180	0				4.99
9.500	2.00	1.93	1.180	0				5.00
9.583	2.01	1.94	1.181	0				5.00
9.667	2.02	1.95	1.181	0				5.01

9.750	2.03	1.96	1.182	O				5.01
9.833	2.05	1.98	1.182	O				5.01
9.917	2.06	1.99	1.183	O				5.02
10.000	2.07	2.00	1.183	O				5.02
10.083	2.09	2.01	1.184	O				5.02
10.167	2.10	2.02	1.184	O				5.03
10.250	2.11	2.03	1.185	O				5.03
10.333	2.13	2.05	1.185	O				5.04
10.417	2.14	2.06	1.186	O				5.04
10.500	2.16	2.07	1.186	O				5.05
10.583	2.17	2.09	1.187	O				5.05
10.667	2.19	2.10	1.188	O				5.06
10.750	2.20	2.11	1.188	O				5.06
10.833	2.22	2.13	1.189	O				5.06
10.917	2.23	2.14	1.189	O				5.07
11.000	2.25	2.16	1.190	O				5.07
11.083	2.27	2.17	1.191	O				5.08
11.167	2.29	2.19	1.191	O				5.08
11.250	2.30	2.20	1.192	O				5.09
11.333	2.32	2.22	1.193	O				5.10
11.417	2.34	2.24	1.194	O				5.10
11.500	2.36	2.25	1.194	O				5.11
11.583	2.38	2.27	1.195	O				5.11
11.667	2.40	2.29	1.196	O				5.12
11.750	2.42	2.31	1.197	O				5.13
11.833	2.45	2.32	1.197	O				5.13
11.917	2.47	2.34	1.198	O				5.14
12.000	2.49	2.36	1.199	O				5.14
12.083	2.50	2.38	1.200	O				5.15
12.167	2.45	2.40	1.201	O				5.16
12.250	2.45	2.40	1.201	O				5.16
12.333	2.47	2.41	1.201	O				5.16
12.417	2.49	2.42	1.202	O				5.16
12.500	2.52	2.43	1.202	O				5.17
12.583	2.55	2.45	1.203	O				5.17
12.667	2.58	2.47	1.204	O				5.18
12.750	2.61	2.48	1.205	OI				5.19
12.833	2.64	2.51	1.205	OI				5.19
12.917	2.68	2.53	1.206	OI				5.20
13.000	2.71	2.55	1.208	OI				5.21
13.083	2.75	2.58	1.209	OI				5.22
13.167	2.79	2.61	1.210	O				5.23
13.250	2.82	2.63	1.211	O				5.24
13.333	2.87	2.66	1.212	O				5.25
13.417	2.90	2.70	1.214	O				5.26
13.500	2.95	2.73	1.215	O				5.27
13.583	3.00	2.77	1.217	O				5.28
13.667	3.05	2.80	1.219	O				5.29
13.750	3.10	2.84	1.220	O				5.31
13.833	3.15	2.88	1.222	O				5.32

13.917	3.21	2.93	1.224	O				5.34
14.000	3.27	2.97	1.226	O				5.35
14.083	3.33	3.02	1.228	O				5.37
14.167	3.40	3.07	1.230	O				5.39
14.250	3.47	3.12	1.233	O				5.40
14.333	3.55	3.18	1.235	O				5.42
14.417	3.63	3.24	1.238	O				5.44
14.500	3.72	3.30	1.241	O				5.47
14.583	3.81	3.37	1.244	O				5.49
14.667	3.92	3.41	1.247	OI				5.51
14.750	4.03	3.42	1.251	OI				5.52
14.833	4.16	3.44	1.255	OI				5.54
14.917	4.28	3.46	1.261	OI				5.56
15.000	4.44	3.48	1.267	OI				5.59
15.083	4.60	3.51	1.274	OI				5.62
15.167	4.79	3.54	1.282	OI				5.65
15.250	4.99	3.57	1.291	OI				5.68
15.333	5.25	3.61	1.301	O I				5.73
15.417	5.34	3.65	1.313	O I				5.77
15.500	4.99	3.69	1.323	OI				5.81
15.583	5.04	3.72	1.332	OI				5.85
15.667	5.52	3.76	1.343	O I				5.89
15.750	6.12	3.81	1.357	O I				5.95
15.833	7.11	3.88	1.376	O I				6.03
15.917	8.62	3.98	1.403	O I				6.13
16.000	12.17	4.14	1.447	O	I			6.31
16.083	22.17	4.45	1.535	O		I		6.68
16.167	41.44	5.05	1.722	O			I	7.49
16.250	23.24	5.70	1.907	O		I		8.49
16.333	9.35	6.03	1.979	O	I			9.05
16.417	6.29	6.09	1.991	O				9.14
16.500	5.61	6.09	1.990	O				9.14
16.583	5.27	6.07	1.986	O				9.10
16.667	4.83	6.03	1.979	IO				9.05
16.750	4.48	5.99	1.970	IO				8.97
16.833	4.18	5.94	1.958	IO				8.88
16.917	3.94	5.88	1.946	IO				8.78
17.000	3.74	5.82	1.932	I O				8.67
17.083	3.57	5.75	1.917	I O				8.56
17.167	3.42	5.69	1.902	I O				8.46
17.250	3.28	5.63	1.886	I O				8.37
17.333	3.16	5.57	1.870	I O				8.28
17.417	3.06	5.51	1.853	I O				8.19
17.500	2.96	5.45	1.836	I O				8.10
17.583	2.87	5.39	1.818	I O				8.01
17.667	2.79	5.33	1.801	I O				7.91
17.750	2.72	5.27	1.783	I O				7.82
17.833	2.65	5.21	1.766	I O				7.72
17.917	2.59	5.15	1.748	I O				7.63
18.000	2.53	5.09	1.731	I O				7.54

18.083	2.49	5.03	1.713	I O				7.45
18.167	2.51	4.97	1.696	I O				7.38
18.250	2.49	4.92	1.679	I O				7.30
18.333	2.45	4.86	1.662	I O				7.23
18.417	2.41	4.81	1.646	I O				7.16
18.500	2.36	4.75	1.629	I O				7.09
18.583	2.33	4.70	1.613	I O				7.02
18.667	2.29	4.65	1.596	I O				6.95
18.750	2.25	4.59	1.580	I O				6.88
18.833	2.22	4.54	1.564	I O				6.81
18.917	2.19	4.49	1.548	I O				6.74
19.000	2.16	4.44	1.533	I O				6.67
19.083	2.13	4.39	1.517	I O				6.60
19.167	2.10	4.34	1.501	I O				6.53
19.250	2.08	4.29	1.486	I O				6.47
19.333	2.05	4.23	1.471	I O				6.41
19.417	2.02	4.18	1.456	I O				6.35
19.500	2.00	4.12	1.441	I O				6.29
19.583	1.98	4.07	1.427	I O				6.23
19.667	1.96	4.02	1.413	I O				6.17
19.750	1.93	3.96	1.399	I O				6.12
19.833	1.91	3.91	1.385	I O				6.06
19.917	1.89	3.86	1.371	IO				6.01
20.000	1.87	3.81	1.358	IO				5.95
20.083	1.86	3.77	1.344	IO				5.90
20.167	1.84	3.72	1.331	IO				5.85
20.250	1.82	3.67	1.318	IO				5.79
20.333	1.80	3.63	1.306	IO				5.74
20.417	1.79	3.58	1.293	IO				5.69
20.500	1.77	3.54	1.281	IO				5.64
20.583	1.75	3.49	1.269	IO				5.60
20.667	1.74	3.45	1.257	IO				5.55
20.750	1.72	3.41	1.245	IO				5.50
20.833	1.71	3.17	1.235	IO				5.42
20.917	1.70	2.95	1.225	IO				5.35
21.000	1.68	2.77	1.217	IO				5.28
21.083	1.67	2.61	1.210	IO				5.23
21.167	1.65	2.47	1.204	O				5.18
21.250	1.64	2.35	1.199	O				5.14
21.333	1.63	2.25	1.194	O				5.11
21.417	1.62	2.16	1.190	O				5.08
21.500	1.61	2.08	1.187	O				5.05
21.583	1.59	2.01	1.184	O				5.02
21.667	1.58	1.95	1.181	O				5.00
21.750	1.57	1.89	1.179	O				4.99
21.833	1.56	1.85	1.176	O				4.97
21.917	1.55	1.80	1.175	O				4.95
22.000	1.54	1.77	1.173	O				4.94
22.083	1.53	1.73	1.171	O				4.93
22.167	1.52	1.70	1.170	O				4.92

22.250	1.51	1.68	1.169	|O	|	|	|	4.91
22.333	1.50	1.65	1.168	|O	|	|	|	4.90
22.417	1.49	1.63	1.167	|O	|	|	|	4.89
22.500	1.48	1.61	1.166	|O	|	|	|	4.89
22.583	1.47	1.59	1.165	|O	|	|	|	4.88
22.667	1.46	1.57	1.164	|O	|	|	|	4.87
22.750	1.46	1.56	1.164	|O	|	|	|	4.87
22.833	1.45	1.54	1.163	|O	|	|	|	4.86
22.917	1.44	1.53	1.162	|O	|	|	|	4.86
23.000	1.43	1.51	1.162	|O	|	|	|	4.85
23.083	1.42	1.50	1.161	|O	|	|	|	4.85
23.167	1.41	1.49	1.161	|O	|	|	|	4.85
23.250	1.41	1.48	1.160	|O	|	|	|	4.84
23.333	1.40	1.47	1.160	|O	|	|	|	4.84
23.417	1.39	1.46	1.159	|O	|	|	|	4.84
23.500	1.38	1.45	1.159	|O	|	|	|	4.83
23.583	1.38	1.44	1.158	|O	|	|	|	4.83
23.667	1.37	1.43	1.158	|O	|	|	|	4.83
23.750	1.36	1.42	1.158	|O	|	|	|	4.82
23.833	1.36	1.41	1.157	|O	|	|	|	4.82
23.917	1.35	1.40	1.157	|O	|	|	|	4.82
24.000	1.34	1.39	1.157	|O	|	|	|	4.81
24.083	1.16	1.37	1.156	IO	|	|	|	4.81
24.167	0.40	1.29	1.152	O	|	|	|	4.78
24.250	0.06	1.13	1.145	O	|	|	|	4.73
24.333	0.01	0.97	1.138	O	|	|	|	4.67
24.417	0.00	0.83	1.132	O	|	|	|	4.62
24.500	0.00	0.71	1.127	O	|	|	|	4.58
24.583	0.00	0.61	1.122	O	|	|	|	4.55
24.667	0.00	0.52	1.118	O	|	|	|	4.52
24.750	0.00	0.47	1.115	O	|	|	|	4.50
24.833	0.00	0.46	1.112	O	|	|	|	4.49
24.917	0.00	0.45	1.108	O	|	|	|	4.49
25.000	0.00	0.45	1.105	O	|	|	|	4.48
25.083	0.00	0.44	1.102	O	|	|	|	4.48
25.167	0.00	0.43	1.099	O	|	|	|	4.48
25.250	0.00	0.43	1.096	O	|	|	|	4.47
25.333	0.00	0.42	1.093	O	|	|	|	4.47
25.417	0.00	0.41	1.090	O	|	|	|	4.46
25.500	0.00	0.41	1.088	O	|	|	|	4.46
25.583	0.00	0.40	1.085	O	|	|	|	4.45
25.667	0.00	0.39	1.082	O	|	|	|	4.45
25.750	0.00	0.39	1.079	O	|	|	|	4.45
25.833	0.00	0.38	1.077	O	|	|	|	4.44
25.917	0.00	0.38	1.074	O	|	|	|	4.44
26.000	0.00	0.37	1.072	O	|	|	|	4.44
26.083	0.00	0.36	1.069	O	|	|	|	4.43
26.167	0.00	0.36	1.067	O	|	|	|	4.43
26.250	0.00	0.35	1.064	O	|	|	|	4.42
26.333	0.00	0.35	1.062	O	|	|	|	4.42

26.417	0.00	0.34	1.059	O				4.42
26.500	0.00	0.34	1.057	O				4.41
26.583	0.00	0.33	1.055	O				4.41
26.667	0.00	0.33	1.052	O				4.41
26.750	0.00	0.32	1.050	O				4.40
26.833	0.00	0.32	1.048	O				4.40
26.917	0.00	0.31	1.046	O				4.40
27.000	0.00	0.31	1.044	O				4.40
27.083	0.00	0.30	1.042	O				4.39
27.167	0.00	0.30	1.039	O				4.39
27.250	0.00	0.29	1.037	O				4.39
27.333	0.00	0.29	1.035	O				4.38
27.417	0.00	0.28	1.033	O				4.38
27.500	0.00	0.28	1.032	O				4.38
27.583	0.00	0.27	1.030	O				4.37
27.667	0.00	0.27	1.028	O				4.37
27.750	0.00	0.27	1.026	O				4.37
27.833	0.00	0.26	1.024	O				4.37
27.917	0.00	0.26	1.022	O				4.36
28.000	0.00	0.25	1.021	O				4.36
28.083	0.00	0.25	1.019	O				4.36
28.167	0.00	0.25	1.017	O				4.36
28.250	0.00	0.24	1.015	O				4.35
28.333	0.00	0.24	1.014	O				4.35
28.417	0.00	0.24	1.012	O				4.35
28.500	0.00	0.23	1.010	O				4.35
28.583	0.00	0.23	1.009	O				4.34
28.667	0.00	0.22	1.007	O				4.34
28.750	0.00	0.22	1.006	O				4.34
28.833	0.00	0.22	1.004	O				4.34
28.917	0.00	0.21	1.003	O				4.34
29.000	0.00	0.21	1.001	O				4.33
29.083	0.00	0.21	1.000	O				4.33
29.167	0.00	0.20	0.999	O				4.33
29.250	0.00	0.20	0.997	O				4.33
29.333	0.00	0.20	0.996	O				4.33
29.417	0.00	0.19	0.994	O				4.32
29.500	0.00	0.19	0.993	O				4.32
29.583	0.00	0.19	0.992	O				4.32
29.667	0.00	0.19	0.990	O				4.32
29.750	0.00	0.18	0.989	O				4.32
29.833	0.00	0.18	0.988	O				4.31
29.917	0.00	0.18	0.987	O				4.31
30.000	0.00	0.17	0.985	O				4.31
30.083	0.00	0.17	0.984	O				4.31
30.167	0.00	0.17	0.983	O				4.31
30.250	0.00	0.17	0.982	O				4.31
30.333	0.00	0.16	0.981	O				4.30
30.417	0.00	0.16	0.980	O				4.30
30.500	0.00	0.16	0.979	O				4.30

30.583	0.00	0.16	0.978	O	|	|	|	|	4.30
30.667	0.00	0.15	0.976	O	|	|	|	|	4.30
30.750	0.00	0.15	0.975	O	|	|	|	|	4.30
30.833	0.00	0.15	0.974	O	|	|	|	|	4.29
30.917	0.00	0.15	0.973	O	|	|	|	|	4.29
31.000	0.00	0.14	0.972	O	|	|	|	|	4.29
31.083	0.00	0.14	0.971	O	|	|	|	|	4.29
31.167	0.00	0.14	0.970	O	|	|	|	|	4.29
31.250	0.00	0.14	0.969	O	|	|	|	|	4.29
31.333	0.00	0.14	0.969	O	|	|	|	|	4.29
31.417	0.00	0.13	0.968	O	|	|	|	|	4.28
31.500	0.00	0.13	0.967	O	|	|	|	|	4.28
31.583	0.00	0.13	0.966	O	|	|	|	|	4.28
31.667	0.00	0.13	0.965	O	|	|	|	|	4.28
31.750	0.00	0.13	0.964	O	|	|	|	|	4.28
31.833	0.00	0.12	0.963	O	|	|	|	|	4.28
31.917	0.00	0.12	0.962	O	|	|	|	|	4.28
32.000	0.00	0.12	0.961	O	|	|	|	|	4.28
32.083	0.00	0.12	0.961	O	|	|	|	|	4.27
32.167	0.00	0.12	0.960	O	|	|	|	|	4.27
32.250	0.00	0.11	0.959	O	|	|	|	|	4.27
32.333	0.00	0.11	0.958	O	|	|	|	|	4.27
32.417	0.00	0.11	0.958	O	|	|	|	|	4.27
32.500	0.00	0.11	0.957	O	|	|	|	|	4.27
32.583	0.00	0.11	0.956	O	|	|	|	|	4.27
32.667	0.00	0.11	0.955	O	|	|	|	|	4.27
32.750	0.00	0.10	0.955	O	|	|	|	|	4.27
32.833	0.00	0.10	0.954	O	|	|	|	|	4.27
32.917	0.00	0.10	0.953	O	|	|	|	|	4.26
33.000	0.00	0.10	0.952	O	|	|	|	|	4.26
33.083	0.00	0.10	0.952	O	|	|	|	|	4.26
33.167	0.00	0.10	0.951	O	|	|	|	|	4.26
33.250	0.00	0.09	0.950	O	|	|	|	|	4.26
33.333	0.00	0.09	0.950	O	|	|	|	|	4.26
33.417	0.00	0.09	0.949	O	|	|	|	|	4.26
33.500	0.00	0.09	0.949	O	|	|	|	|	4.26
33.583	0.00	0.09	0.948	O	|	|	|	|	4.26
33.667	0.00	0.09	0.947	O	|	|	|	|	4.26
33.750	0.00	0.09	0.947	O	|	|	|	|	4.25
33.833	0.00	0.08	0.946	O	|	|	|	|	4.25
33.917	0.00	0.08	0.946	O	|	|	|	|	4.25
34.000	0.00	0.08	0.945	O	|	|	|	|	4.25
34.083	0.00	0.08	0.944	O	|	|	|	|	4.25
34.167	0.00	0.08	0.944	O	|	|	|	|	4.25
34.250	0.00	0.08	0.943	O	|	|	|	|	4.25
34.333	0.00	0.08	0.943	O	|	|	|	|	4.25
34.417	0.00	0.08	0.942	O	|	|	|	|	4.25
34.500	0.00	0.07	0.942	O	|	|	|	|	4.25
34.583	0.00	0.07	0.941	O	|	|	|	|	4.25
34.667	0.00	0.07	0.941	O	|	|	|	|	4.25

34.750	0.00	0.07	0.940	O					4.25
34.833	0.00	0.07	0.940	O					4.24
34.917	0.00	0.07	0.939	O					4.24
35.000	0.00	0.07	0.939	O					4.24
35.083	0.00	0.07	0.938	O					4.24
35.167	0.00	0.07	0.938	O					4.24
35.250	0.00	0.06	0.937	O					4.24
35.333	0.00	0.06	0.937	O					4.24
35.417	0.00	0.06	0.937	O					4.24
35.500	0.00	0.06	0.936	O					4.24
35.583	0.00	0.06	0.936	O					4.24
35.667	0.00	0.06	0.935	O					4.24
35.750	0.00	0.06	0.935	O					4.24
35.833	0.00	0.06	0.934	O					4.24
35.917	0.00	0.06	0.934	O					4.24
36.000	0.00	0.06	0.934	O					4.24
36.083	0.00	0.06	0.933	O					4.24
36.167	0.00	0.05	0.933	O					4.23
36.250	0.00	0.05	0.933	O					4.23
36.333	0.00	0.05	0.932	O					4.23
36.417	0.00	0.05	0.932	O					4.23
36.500	0.00	0.05	0.931	O					4.23
36.583	0.00	0.05	0.931	O					4.23
36.667	0.00	0.05	0.931	O					4.23
36.750	0.00	0.05	0.930	O					4.23
36.833	0.00	0.05	0.930	O					4.23
36.917	0.00	0.05	0.930	O					4.23
37.000	0.00	0.05	0.929	O					4.23
37.083	0.00	0.05	0.929	O					4.23
37.167	0.00	0.05	0.929	O					4.23
37.250	0.00	0.04	0.929	O					4.23
37.333	0.00	0.04	0.928	O					4.23
37.417	0.00	0.04	0.928	O					4.23
37.500	0.00	0.04	0.928	O					4.23
37.583	0.00	0.04	0.927	O					4.23
37.667	0.00	0.04	0.927	O					4.23
37.750	0.00	0.04	0.927	O					4.23
37.833	0.00	0.04	0.926	O					4.23
37.917	0.00	0.04	0.926	O					4.22
38.000	0.00	0.04	0.926	O					4.22
38.083	0.00	0.04	0.926	O					4.22
38.167	0.00	0.04	0.925	O					4.22
38.250	0.00	0.04	0.925	O					4.22
38.333	0.00	0.04	0.925	O					4.22
38.417	0.00	0.04	0.925	O					4.22
38.500	0.00	0.04	0.924	O					4.22
38.583	0.00	0.03	0.924	O					4.22
38.667	0.00	0.03	0.924	O					4.22
38.750	0.00	0.03	0.924	O					4.22
38.833	0.00	0.03	0.923	O					4.22

38.917	0.00	0.03	0.923	O				4.22
39.000	0.00	0.03	0.923	O				4.22
39.083	0.00	0.03	0.923	O				4.22
39.167	0.00	0.03	0.923	O				4.22
39.250	0.00	0.03	0.922	O				4.22
39.333	0.00	0.03	0.922	O				4.22
39.417	0.00	0.03	0.922	O				4.22
39.500	0.00	0.03	0.922	O				4.22
39.583	0.00	0.03	0.922	O				4.22
39.667	0.00	0.03	0.921	O				4.22
39.750	0.00	0.03	0.921	O				4.22
39.833	0.00	0.03	0.921	O				4.22
39.917	0.00	0.03	0.921	O				4.22
40.000	0.00	0.03	0.921	O				4.22
40.083	0.00	0.03	0.920	O				4.22
40.167	0.00	0.03	0.920	O				4.22
40.250	0.00	0.03	0.920	O				4.22
40.333	0.00	0.02	0.920	O				4.22
40.417	0.00	0.02	0.920	O				4.22
40.500	0.00	0.02	0.920	O				4.22
40.583	0.00	0.02	0.919	O				4.22
40.667	0.00	0.02	0.919	O				4.21
40.750	0.00	0.02	0.919	O				4.21
40.833	0.00	0.02	0.919	O				4.21
40.917	0.00	0.02	0.919	O				4.21
41.000	0.00	0.02	0.919	O				4.21
41.083	0.00	0.02	0.918	O				4.21
41.167	0.00	0.02	0.918	O				4.21
41.250	0.00	0.02	0.918	O				4.21
41.333	0.00	0.02	0.918	O				4.21
41.417	0.00	0.02	0.918	O				4.21
41.500	0.00	0.02	0.918	O				4.21
41.583	0.00	0.02	0.918	O				4.21
41.667	0.00	0.02	0.917	O				4.21
41.750	0.00	0.02	0.917	O				4.21
41.833	0.00	0.02	0.917	O				4.21
41.917	0.00	0.02	0.917	O				4.21
42.000	0.00	0.02	0.917	O				4.21
42.083	0.00	0.02	0.917	O				4.21
42.167	0.00	0.02	0.917	O				4.21
42.250	0.00	0.02	0.917	O				4.21
42.333	0.00	0.02	0.916	O				4.21
42.417	0.00	0.02	0.916	O				4.21
42.500	0.00	0.02	0.916	O				4.21
42.583	0.00	0.02	0.916	O				4.21
42.667	0.00	0.02	0.916	O				4.21
42.750	0.00	0.02	0.916	O				4.21
42.833	0.00	0.02	0.916	O				4.21
42.917	0.00	0.02	0.916	O				4.21
43.000	0.00	0.02	0.916	O				4.21

43.083	0.00	0.01	0.916	O				4.21
43.167	0.00	0.01	0.915	O				4.21
43.250	0.00	0.01	0.915	O				4.21
43.333	0.00	0.01	0.915	O				4.21
43.417	0.00	0.01	0.915	O				4.21
43.500	0.00	0.01	0.915	O				4.21
43.583	0.00	0.01	0.915	O				4.21
43.667	0.00	0.01	0.915	O				4.21
43.750	0.00	0.01	0.915	O				4.21
43.833	0.00	0.01	0.915	O				4.21
43.917	0.00	0.01	0.915	O				4.21
44.000	0.00	0.01	0.914	O				4.21
44.083	0.00	0.01	0.914	O				4.21
44.167	0.00	0.01	0.914	O				4.21
44.250	0.00	0.01	0.914	O				4.21
44.333	0.00	0.01	0.914	O				4.21
44.417	0.00	0.01	0.914	O				4.21
44.500	0.00	0.01	0.914	O				4.21
44.583	0.00	0.01	0.914	O				4.21
44.667	0.00	0.01	0.914	O				4.21
44.750	0.00	0.01	0.914	O				4.21
44.833	0.00	0.01	0.914	O				4.21
44.917	0.00	0.01	0.914	O				4.21
45.000	0.00	0.01	0.914	O				4.21
45.083	0.00	0.01	0.913	O				4.21
45.167	0.00	0.01	0.913	O				4.21
45.250	0.00	0.01	0.913	O				4.21
45.333	0.00	0.01	0.913	O				4.21
45.417	0.00	0.01	0.913	O				4.21
45.500	0.00	0.01	0.913	O				4.21
45.583	0.00	0.01	0.913	O				4.21
45.667	0.00	0.01	0.913	O				4.21
45.750	0.00	0.01	0.913	O				4.21
45.833	0.00	0.01	0.913	O				4.21
45.917	0.00	0.01	0.913	O				4.21
46.000	0.00	0.01	0.913	O				4.21
46.083	0.00	0.01	0.913	O				4.21
46.167	0.00	0.01	0.913	O				4.21
46.250	0.00	0.01	0.913	O				4.21
46.333	0.00	0.01	0.913	O				4.21
46.417	0.00	0.01	0.912	O				4.21
46.500	0.00	0.01	0.912	O				4.20
46.583	0.00	0.01	0.912	O				4.20
46.667	0.00	0.01	0.912	O				4.20
46.750	0.00	0.01	0.912	O				4.20
46.833	0.00	0.01	0.912	O				4.20
46.917	0.00	0.01	0.912	O				4.20
47.000	0.00	0.01	0.912	O				4.20
47.083	0.00	0.01	0.912	O				4.20
47.167	0.00	0.01	0.912	O				4.20

47.250	0.00	0.01	0.912	O				4.20
47.333	0.00	0.01	0.912	O				4.20
47.417	0.00	0.01	0.912	O				4.20
47.500	0.00	0.01	0.912	O				4.20
47.583	0.00	0.01	0.912	O				4.20
47.667	0.00	0.01	0.912	O				4.20
47.750	0.00	0.01	0.912	O				4.20
47.833	0.00	0.01	0.912	O				4.20
47.917	0.00	0.01	0.912	O				4.20
48.000	0.00	0.01	0.912	O				4.20
48.083	0.00	0.01	0.912	O				4.20
48.167	0.00	0.01	0.911	O				4.20
48.250	0.00	0.01	0.911	O				4.20
48.333	0.00	0.01	0.911	O				4.20
48.417	0.00	0.01	0.911	O				4.20
48.500	0.00	0.01	0.911	O				4.20
48.583	0.00	0.01	0.911	O				4.20
48.667	0.00	0.01	0.911	O				4.20
48.750	0.00	0.01	0.911	O				4.20
48.833	0.00	0.01	0.911	O				4.20
48.917	0.00	0.00	0.911	O				4.20
49.000	0.00	0.00	0.911	O				4.20
49.083	0.00	0.00	0.911	O				4.20
49.167	0.00	0.00	0.911	O				4.20
49.250	0.00	0.00	0.911	O				4.20
49.333	0.00	0.00	0.911	O				4.20
49.417	0.00	0.00	0.911	O				4.20
49.500	0.00	0.00	0.911	O				4.20
49.583	0.00	0.00	0.911	O				4.20
49.667	0.00	0.00	0.911	O				4.20
49.750	0.00	0.00	0.911	O				4.20
49.833	0.00	0.00	0.911	O				4.20
49.917	0.00	0.00	0.911	O				4.20
50.000	0.00	0.00	0.911	O				4.20
50.083	0.00	0.00	0.911	O				4.20
50.167	0.00	0.00	0.911	O				4.20
50.250	0.00	0.00	0.911	O				4.20
50.333	0.00	0.00	0.911	O				4.20
50.417	0.00	0.00	0.911	O				4.20
50.500	0.00	0.00	0.911	O				4.20
50.583	0.00	0.00	0.911	O				4.20
50.667	0.00	0.00	0.911	O				4.20
50.750	0.00	0.00	0.911	O				4.20
50.833	0.00	0.00	0.911	O				4.20
50.917	0.00	0.00	0.910	O				4.20
51.000	0.00	0.00	0.910	O				4.20
51.083	0.00	0.00	0.910	O				4.20
51.167	0.00	0.00	0.910	O				4.20
51.250	0.00	0.00	0.910	O				4.20
51.333	0.00	0.00	0.910	O				4.20

51.417	0.00	0.00	0.910	O	|	|	|	4.20
51.500	0.00	0.00	0.910	O	|	|	|	4.20
51.583	0.00	0.00	0.910	O	|	|	|	4.20
51.667	0.00	0.00	0.910	O	|	|	|	4.20
51.750	0.00	0.00	0.910	O	|	|	|	4.20
51.833	0.00	0.00	0.910	O	|	|	|	4.20
51.917	0.00	0.00	0.910	O	|	|	|	4.20
52.000	0.00	0.00	0.910	O	|	|	|	4.20
52.083	0.00	0.00	0.910	O	|	|	|	4.20
52.167	0.00	0.00	0.910	O	|	|	|	4.20
52.250	0.00	0.00	0.910	O	|	|	|	4.20
52.333	0.00	0.00	0.910	O	|	|	|	4.20
52.417	0.00	0.00	0.910	O	|	|	|	4.20
52.500	0.00	0.00	0.910	O	|	|	|	4.20
52.583	0.00	0.00	0.910	O	|	|	|	4.20
52.667	0.00	0.00	0.910	O	|	|	|	4.20
52.750	0.00	0.00	0.910	O	|	|	|	4.20
52.833	0.00	0.00	0.910	O	|	|	|	4.20
52.917	0.00	0.00	0.910	O	|	|	|	4.20
53.000	0.00	0.00	0.910	O	|	|	|	4.20
53.083	0.00	0.00	0.910	O	|	|	|	4.20
53.167	0.00	0.00	0.910	O	|	|	|	4.20
53.250	0.00	0.00	0.910	O	|	|	|	4.20
53.333	0.00	0.00	0.910	O	|	|	|	4.20
53.417	0.00	0.00	0.910	O	|	|	|	4.20
53.500	0.00	0.00	0.910	O	|	|	|	4.20
53.583	0.00	0.00	0.910	O	|	|	|	4.20
53.667	0.00	0.00	0.910	O	|	|	|	4.20
53.750	0.00	0.00	0.910	O	|	|	|	4.20
53.833	0.00	0.00	0.910	O	|	|	|	4.20
53.917	0.00	0.00	0.910	O	|	|	|	4.20
54.000	0.00	0.00	0.910	O	|	|	|	4.20
54.083	0.00	0.00	0.910	O	|	|	|	4.20
54.167	0.00	0.00	0.910	O	|	|	|	4.20
54.250	0.00	0.00	0.910	O	|	|	|	4.20
54.333	0.00	0.00	0.910	O	|	|	|	4.20
54.417	0.00	0.00	0.910	O	|	|	|	4.20
54.500	0.00	0.00	0.910	O	|	|	|	4.20
54.583	0.00	0.00	0.910	O	|	|	|	4.20
54.667	0.00	0.00	0.910	O	|	|	|	4.20
54.750	0.00	0.00	0.910	O	|	|	|	4.20
54.833	0.00	0.00	0.910	O	|	|	|	4.20
54.917	0.00	0.00	0.910	O	|	|	|	4.20
55.000	0.00	0.00	0.910	O	|	|	|	4.20
55.083	0.00	0.00	0.910	O	|	|	|	4.20
55.167	0.00	0.00	0.910	O	|	|	|	4.20
55.250	0.00	0.00	0.910	O	|	|	|	4.20
55.333	0.00	0.00	0.910	O	|	|	|	4.20
55.417	0.00	0.00	0.910	O	|	|	|	4.20
55.500	0.00	0.00	0.910	O	|	|	|	4.20

55.583	0.00	0.00	0.910	O	|	|	|	| 4.20
55.667	0.00	0.00	0.910	O	|	|	|	| 4.20
55.750	0.00	0.00	0.910	O	|	|	|	| 4.20
55.833	0.00	0.00	0.910	O	|	|	|	| 4.20
55.917	0.00	0.00	0.910	O	|	|	|	| 4.20
56.000	0.00	0.00	0.910	O	|	|	|	| 4.20
56.083	0.00	0.00	0.910	O	|	|	|	| 4.20
56.167	0.00	0.00	0.910	O	|	|	|	| 4.20
56.250	0.00	0.00	0.910	O	|	|	|	| 4.20
56.333	0.00	0.00	0.910	O	|	|	|	| 4.20
56.417	0.00	0.00	0.910	O	|	|	|	| 4.20
56.500	0.00	0.00	0.910	O	|	|	|	| 4.20
56.583	0.00	0.00	0.910	O	|	|	|	| 4.20
56.667	0.00	0.00	0.910	O	|	|	|	| 4.20
56.750	0.00	0.00	0.909	O	|	|	|	| 4.20
56.833	0.00	0.00	0.909	O	|	|	|	| 4.20
56.917	0.00	0.00	0.909	O	|	|	|	| 4.20
57.000	0.00	0.00	0.909	O	|	|	|	| 4.20
57.083	0.00	0.00	0.909	O	|	|	|	| 4.20
57.167	0.00	0.00	0.909	O	|	|	|	| 4.20
57.250	0.00	0.00	0.909	O	|	|	|	| 4.20
57.333	0.00	0.00	0.909	O	|	|	|	| 4.20
57.417	0.00	0.00	0.909	O	|	|	|	| 4.20

**********HYDROGRAPH DATA**********

Number of intervals = 689
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6.090 (CFS)
Total volume = 5.039 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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