PRELIMINARY
HYDROLOGY AND HYDRAULICS STUDY
FOR
TRACT MAP No. 31513
HEMET, CALIFORNIA

PREPARED FOR

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Jimmy C. Chen, P.E. Date

JULY 18, 2025

This report has been prepared by or under the direction of the following registered civil engineer who attests to the technical information contained herein. The registered civil engineer has also judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.



Jimmy C. Chen, RCE 51394 Date
Registered Civil Engineer

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I. PROJECT BACKGROUND AND DESCRIPTION

PURPOSE:

The purpose of this preliminary study is to determine the potential drainage impacts for the proposed residential development of Tract Map 31513. The scope of this study is to analyze the proposed developed drainage patterns for the 100-year storm events using the Rational Method per the Riverside County Flood Control & Water Conservation District (RCFC&WCD) Hydrology Manual and the City of Hemet's detention and retention requirements for new developments.

DESCRIPTION:

Tract Map 31513, also known as Tres Cerritos, is a proposed 121.3-acre residential development project within the City of Hemet in Riverside County. The property is located north of Celest Road in between Old Warren Road and Myers Steet. The development proposes 269 single-family dwelling units, 3.9 acres of park space, one debris basin, two combination water quality detention basins, and a storm conveyance system. See *Section V* for the vicinity map.

Currently, the project site is vacant with evidence of previous grading operations. Topographically, the site is enveloped by steep rocky hillsides from the north. The center of the project consists of gently slopes along previously rough graded roadways and pads southerly towards Celest Road. The existing tributary extends to the top of the hill, northeast of the EMWD water tank site and includes the top of the ridge lines flanking either side of the valley.

The storm runoff flows through the upper portion of the site in a well-defined natural flow path. This channel terminates at the site of the previously graded debris basin. From here the runoff surface flows along the rough graded roadways until it terminates in the previously rough graded eastern detention basin. Eventually the runoff collects and overtops Rose Road onto the adjacent property. There are no existing drainage improvements or drainage facilities within the vicinity of the project site. Runoff from the western portion of the site follows the rough grading roadways to both the existing detention basin and proposed vernal pool. The vernal pool was originally proposed with the previous iteration of this project and was intended to accept the western hillside runoff to sustain the habitat.

PROPOSED DRAINAGE DESIGN CONCEPT:

The project proposes five drainage tributaries, onsite areas "A" (tributary to proposed detention "Basin A") and "B" (tributary to proposed "Basin B"), offsite areas "D", "E", and "F" (tributary to the vernal pool). Area "B" also includes an offsite area "C" of which is consists of the northern tributary of the debris basin (Basin "C"). Offsite areas "D" and "E" include the eastern hillside tributaries of which does not comingle with the onside drainage and detention systems.

Area "A" intercepts and conveys the majority of the developed runoff from the proposed single-family dwelling units to the proposed water quality and detention "Basin A" of which

will provide stormwater treatment capacity and peak flow mitigation.

Area "B" accepts offsite flows discharging from the debris basin and conveys the runoff to "Basin B". The basin will provide stormwater treatment and peak runoff mitigation for the small, eastern portion of the onsite tributary of the single-family dwelling units. Conservatively, the basin has been designed to provide peak runoff mitigation for the debris basin tributary by assuming 100% bypass. However, naturally the debris basin will provide some peak flow mitigation in practice.

Since there are no downstream drainage facilities available, the onsite runoff will need to be detained in a sump condition and discharged at a rate less than the existing runoff rate. Both water quality basins will use a combination of a weir structure and low flow pump within a modified CB100 located within the southern right of way. Per the City of Hemet's retention and detention requirements, the basins will be sized to provide adequate detention capacity to mitigate the 2-year, 24-hour and the 10-year, 24-hour event for this preliminary review. The basins are also required to provide adequate emergency overflow for the 100-year, 1-hour event.

As of the prepared by date of this study, the City of Hemet has indicated that Tract 31513 will be connected to a future RCFC&WCD regional detention facility located within the adjacent property to the south.

II. HYDROLOGY AND HYDRAULIC METHODOLOGY

The modified rational method for this study was based on the "Riverside County Flood Control and Water Conservation District Hydrology Manual" dated April 1978. Software designed by "CivilDESIGN" of San Bernardino was used to solve the modified rational method drainage models of the site to determine the time of concentration, average runoff index number, the average pervious fraction, and the design flow rates for the proposed drainage conveyance system. For the final version of this study, the results from the rational method will be used to determine the proposed inlet sizes and determine the required diameter of the storm water pipelines. The outputs are printed in the Standard Riverside County format and can be found in *Appendix B*.

A. Rainfall:
The computer stores a rainfall database corresponding to Plates D-4.3 and D-4.4 that provides all the required time vs. intensity rate for Riverside County.

Table 1: Project Rainfall Intensity for Rational Method Analysis

Storm Event & Duration	Rainfall (inches)
2-Year, 1-Hour	0.50
100-Year, 1-Hour	1.20
Slope of Intensity	0.50

B. Infiltration:
Soil type was based on NRCS Hydraulic Soils Map (HSG=A, B, and D)

C. Runoff and Routing:
After the "C" value is determined, the computer determines the runoff and routes the flood downstream based on the input model and Plates D-5.5 and D-5.6 as necessary.

Table 2: Present Rational Method Summary

	Area "XA"	Area "XB"	Area "XC"
Acreage, A	104.71 ac.	19.51 ac.	40.56 ac.
100-Yr Runoff, Q	182.5 cfs	44.9 cfs	83.0 cfs
Time of Concentration, Tc	21.16 min.	13.35 min.	15.19 min.
Area Pervious, Ap	1.000	1.000	1.000
AMC II Runoff Index, RI	78.7	85.5	77.0

Table 3: Proposed Rational Method Summary

	Area "A"	Area "B"	Area "C"	Area "D"	Area "E"	Area "F"
Acreage, A	39.29 ac.	32.06 ac.	52.80 ac.	12.66 ac.	1.28 ac.	27.89 ac.
100-Yr Runoff, Q	74.7 cfs	79.4 cfs	122.9 cfs	31.4 cfs	4.20 cfs	69.0 cfs
Time of Concentration, Tc	15.70 min.	12.48 min.	12.334 min.	12.45 min.	6.307 min.	17.23 min.
Area Pervious, Ap	0.414	0.240	1.000	1.000	1.000	0.961
AMC II Runoff Index, RI	41.0	70.1	83.7	89.0	86.3	81.2

SYNTHETIC UNIT HYDROGRAPH METHOD:

The Synthetic Unit Hydrograph, a computational procedure for developing peak runoff and discharge for storms of a specified recurrence interval, was used to evaluate our detention needs onsite. This procedure calculates effective rainfall, which is the portion of the total rainfall that appears as surface runoff, at a specific concentration point. Precipitation data for the project location was taken from RCDC & WCD Plates E-5.1 to E-5.6 respectfully and are provided in *Appendix A.2* of this report. The hydrographs and basin routing for the 2- and 10-year, 24-hour storm events are included to show that the basins are sized sufficiently to provide the required mitigation criteria for increased runoff detention.

The following assumptions/guidelines were applied in the use to the Synthetic Unit Hydrograph Method:

- The 2- and 100-Year point rainfall depths at 24-hour durations were estimated from the RCFC&WCD Precipitation Maps.

Table 4: Project Rainfall Intensity for Unit Hydrograph Analysis

Precipitation Data (inches)				
Year	**1-hr**	**3-hr**	**6-hr**	**24-hr**
2-Year	0.5	0.8	1.2	1.8
100-Year	1.2	1.8	2.5	4.5

- Lag times used for the development of the synthetic unit hydrograph were generated based on the size and shape of the sub basin. The watershed sub area lag times were calculated according to the lag time equation as indicated in the RCFC&WCD Hydrology Manual.
- The basin factor (n-value) was estimated based on filed investigations and existing and planned development.
- The Valley S-Curve graph was used for this project site. The 1- and 24-hour, 5-minute interval data were used.
- An area averaged infiltration rate was calculated based on hydrologic soil type, vegetative cover land use and impervious percentage. The "low loss rate" function was then incorporated. The RCFC&WCD Hydrology Manual's synthetic unit hydrograph method includes a "low loss rate" function when calculating effective rainfall (i.e., total rain minus infiltration).

Table 5: Existing Unit Hydrograph Peak Runoff Summary

Storm Event	Area "XA"	Area "XB"	Area "XC"	Total
2-Yr, 24-hr	2.47 cfs	0.48 cfs	0.99 cfs	3.93 cfs
10-Yr, 24-hr	16.0 cfs	4.7 cfs	6.1 cfs	26.8 cfs

Table 6: Proposed Unit Hydrograph Peak Runoff Summary

Storm Event	Area "A"	Area "B"	Area "C"	Area "D"	Area "E"	Area "F"	Total Peak Runoff, Q
2-Yr, 24-hr	5.5 cfs	8.8 cfs	1.3 cfs	0.31 cfs	0.03 cfs	0.90 cfs	10.38 cfs
10-Yr, 24-hr	9.2 cfs	4.9 cfs	11.8 cfs	3.5 cfs	0.32 cfs	5.7 cfs	35.4 cfs

The synthetic Unit Hydrograph Method outlined in the RCFC&WCD Hydrology Manual was used to develop runoff hydrographs using "CIVILDESIGN" Engineering Software. This software was also used to route the unit hydrographs through the proposed detention basin onsite.

The following assumptions/guidelines were made in the use of Reservoir Routing:

- The Modified Pul's (Storage Indication) Method is used for the detention basin routing studies. The basin routing relationships are based upon the following formula:

  $I - O = \Delta S/\Delta t$
  I = Basin inflow rate (cfs)
  O = Basin outflow rate (cfs)
  ΔS = Change in basin storage during the time step (cubic feet)
  Δt = time step (sec)

- The basin inflow rates are based on the unit hydrograph files (See Appendix D)
- Depth-Storage-Discharge curve is based on Basin Volume worksheet and Stage Discharge Rating Table (See Appendix D)
- The procedure is repeated for each time step until the basin inflow hydrograph has been completely analyzed and the basin outflow becomes negligible.

The proposes three basins, two detention basins (Basin "A" and Basin "B") and a debris basin (Basin "C") as part of its drainage improvements. Basin "A" has approximately 4.90 ac-ft. of available storage with a total depth of 9 feet. The DCV is 1.31 ac-ft for Area "A" (DMA A) of which equates to about 3.50 feet depth in the basin. Basin "B" has a total storage capacity of 3.63 ac-ft. at a total depth of 9 feet. The DCV for Area "B" (DMA B) is 0.49 ac-ft. which equals to 2.54 ft of storage in the basin. Debris Basin "C" has roughly 1.18 ac-ft. capacity of which 0.26 ac-ft. will be reserved for debris capture storage as determined by utilizing the US Corps of Engineers Debris Production Equation 1 Method. Although the primary purpose if Basin "C" is for debris capture, the basin will also provide some detention capacity to offset the peak inflow rate into Basin "B".

In the interim and until the future downstream facilities are constructed, the basin will rely on submersible pumps to drain the basins. Due to project not having a gravity outfall, the project will discharge its proposed stormwater runoff at grade via bubbler structures located on the south side of Celeste Road near the proposed basin locations. The bubbler structures consist of a modified 21-foot long, RCFC&WCD CB 100 that outlets into a 3-foot v-ditch spreader that parallels Celeste Road. However, once the downstream facilities are provided the basin outflow will be controlled by calibrated outlet structures with orifice plates and weirs. For this preliminary study, the pumps will utilize two outflow stages with the first stage pump outflow rate equal to 50% of the DCV to be dewatered in 24-hours (Basin "A"=148 gpm, Basin "B"=55 gpm). The second stage dewaters the basin at a rate equal to the capacity of the basin to be discharged within 72-hours (Basin "A"=340 gpm, Basin "B"=206 gpm). The following has been concluded regarding the basin routing design:

Table 7: Basin Routing Analysis Summary

	Basin "A"	Basin "B"
2-Yr 24-Hr Peak Inflow, Q	5.5 cfs	3.6 cfs
2-Yr 24-Hr Peak Outflow, Q	0.8 cfs	0.5 cfs
10-Yr 24-Hr Peak Inflow, Q	9.2 cfs	16.5 cfs
10-Yr 24-Hr Peak Outflow, Q	7.0 cfs	13.9 cfs
Max. Ponded Depth	8.13 ft.	8.37 ft.
Max. W.S.E.	1502.13	1504.37
Freeboard	0.87 ft.	0.63 ft.

III. CONCLUSIONS

This study evaluated the proposed residential development to assess the hydrology and hydraulics of the project site. The following has been concluded:

1. Two extended detention basins will be required for stormwater treatment of the proposed development.
2. Mitigation for increased runoff is required since the project does not have any downstream facilities to discharge to at the time of this study.
3. The storm drain systems are to be sized such that they convey runoff to the basins and provide flood protection. Catch basins are located such that they provide flood protection.

IV. REFERENCES

1. Riverside County Flood Control and Water Conservation District Hydrology Manual, April 1978.

2. Hydrology & Hydraulics Analysis for Tract 31513, prepared by Mayers & Associates Civil Engineering, Inc., dated October 8th, 2021.

V. VICINITY MAP



VICINITY MAP

NTS

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT PLATES & REFERENCE MAPS ..... A

- A.1 - NRCS HYDRAULIC SOILS MAP
- A.2 - RCFC & WCD PRECIPITATION MAPS
- A.3 - SLOPE OF INTENSITY DURATION CURVE (PLATE D-4.6)

Search

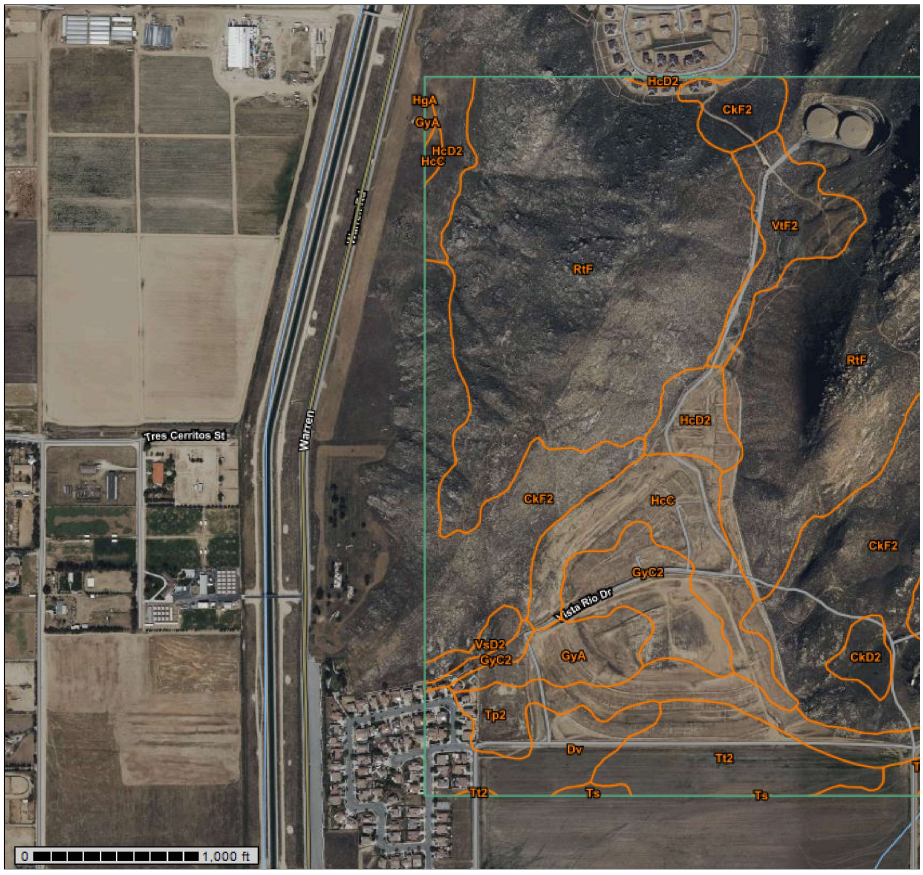
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- Waste Management
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  - Hydrologic Soil Group and Surface Runoff
    - View Description | View Soil Report
    - **Options**
      - Include minor soils? ☐
    - View Description | View Soil Report
  - Water Features
- Water Management
- Wildlife Management

Soil Map

Scale (not to scale)



Report — Hydrologic Soil Group and Surface Runoff

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Western Riverside Area, California

Map symbol and soil name	Pct. of map unit	Surface Runoff	Hydrologic Soil Group
CkD2—Cieneba rocky sandy loam, 8 to 15 percent slopes, eroded			
Cieneba	75	Low	D
CkF2—Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded			
Cieneba	75	Medium	D
Dv—Domino silt loam, saline-alkali			
Domino	85	High	D
GyA—Greenfield sandy loam, 0 to 2 percent slopes			
Greenfield	85	Very low	A
GyC2—Greenfield sandy loam, 2 to 8 percent slopes, eroded			
Greenfield	85	Low	A

Western Riverside Area, California			
HcC—Hanford coarse sandy loam, 2 to 8 percent slopes			
Hanford	85	Low	A
HcD2—Hanford coarse sandy loam, 8 to 15 percent slopes, eroded			
Hanford	85	Low	A
HgA—Hanford fine sandy loam, 0 to 2 percent slopes			
Hanford	85	Very low	A
RtF—Rockland			
Rockland	100	Very high	—
Tp2—Traver loamy fine sand, eroded			
Traver	85	Low	B
Tr2—Traver loamy fine sand, saline-alkali, eroded			
Traver	85	Low	B
Ts—Traver fine sandy loam, saline-alkali			
Traver	85	Low	B
Tt2—Traver fine sandy loam, strongly saline-alkali, eroded			
Traver	85	Low	B
VsD2—Vista coarse sandy loam, 8 to 15 percent slopes, eroded			
Vista	85	Low	B
VtF2—Vista rocky coarse sandy loam, 2 to 35 percent slopes, eroded			
Vista	75	Low	B

Description — Hydrologic Soil Group and Surface Runoff

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

Hydrologic Soil Group and Surface Runoff

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Report—Hydrologic Soil Group and Surface Runoff

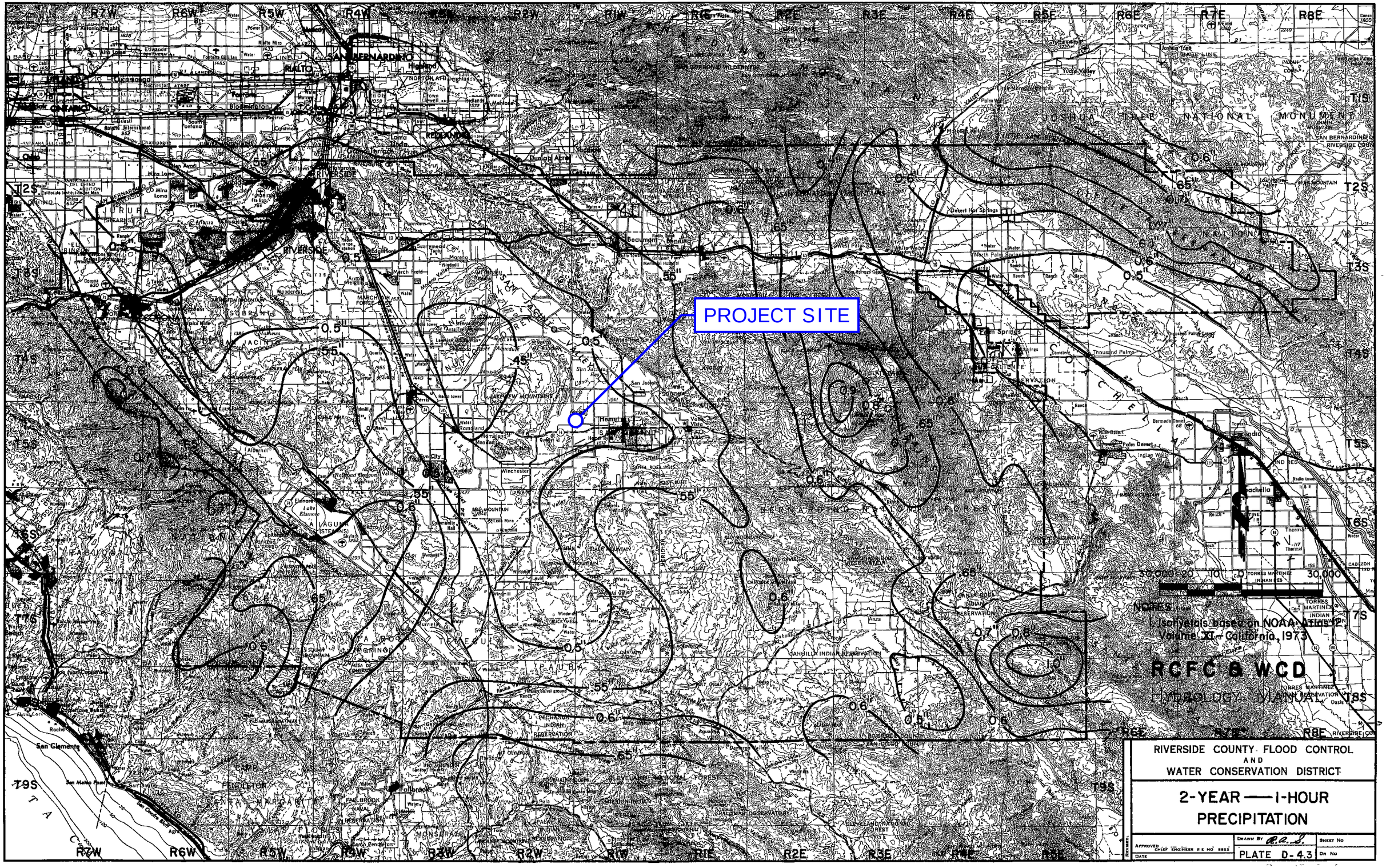
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Hydrologic Soil Group and Surface Runoff–Western Riverside Area, California			
Map symbol and soil name	**Pct. of map unit**	**Surface Runoff**	**Hydrologic Soil Group**
CkD2—Cieneba rocky sandy loam, 8 to 15 percent slopes, eroded			
Cieneba	75	Low	D

Hydrologic Soil Group and Surface Runoff–Western Riverside Area, California			
Map symbol and soil name	**Pct. of map unit**	**Surface Runoff**	**Hydrologic Soil Group**
CkF2—Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded			
Cieneba	75	Medium	D
Dv—Domino silt loam, saline-alkali			
Domino	85	High	D
GyA—Greenfield sandy loam, 0 to 2 percent slopes			
Greenfield	85	Very low	A
GyC2—Greenfield sandy loam, 2 to 8 percent slopes, eroded			
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HcC—Hanford coarse sandy loam, 2 to 8 percent slopes			
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Vista	75	Low	B

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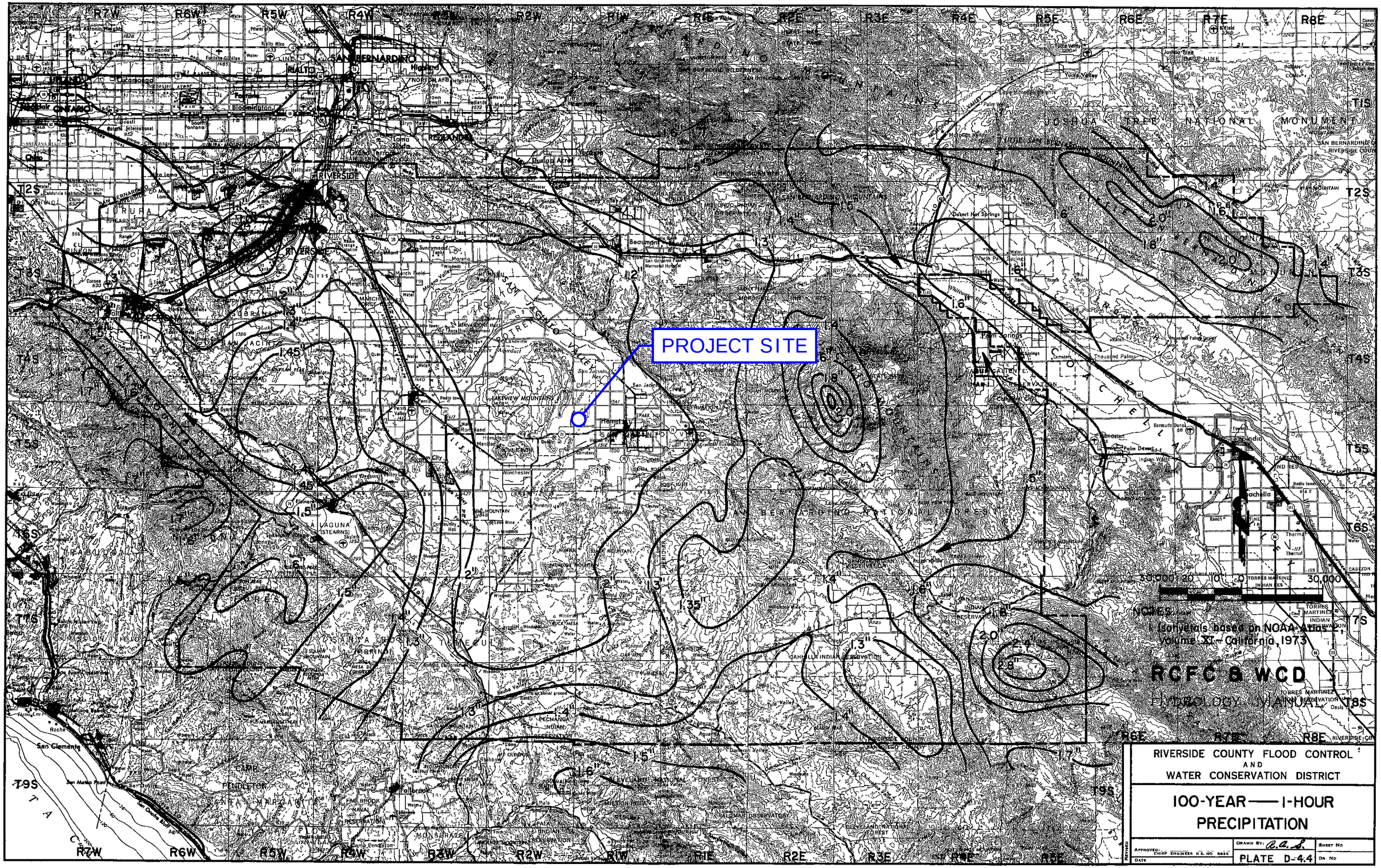
Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 17, Aug 30, 2024



RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

2-YEAR — 1-HOUR PRECIPITATION

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DATE	PLATE D-4.3	DR NO

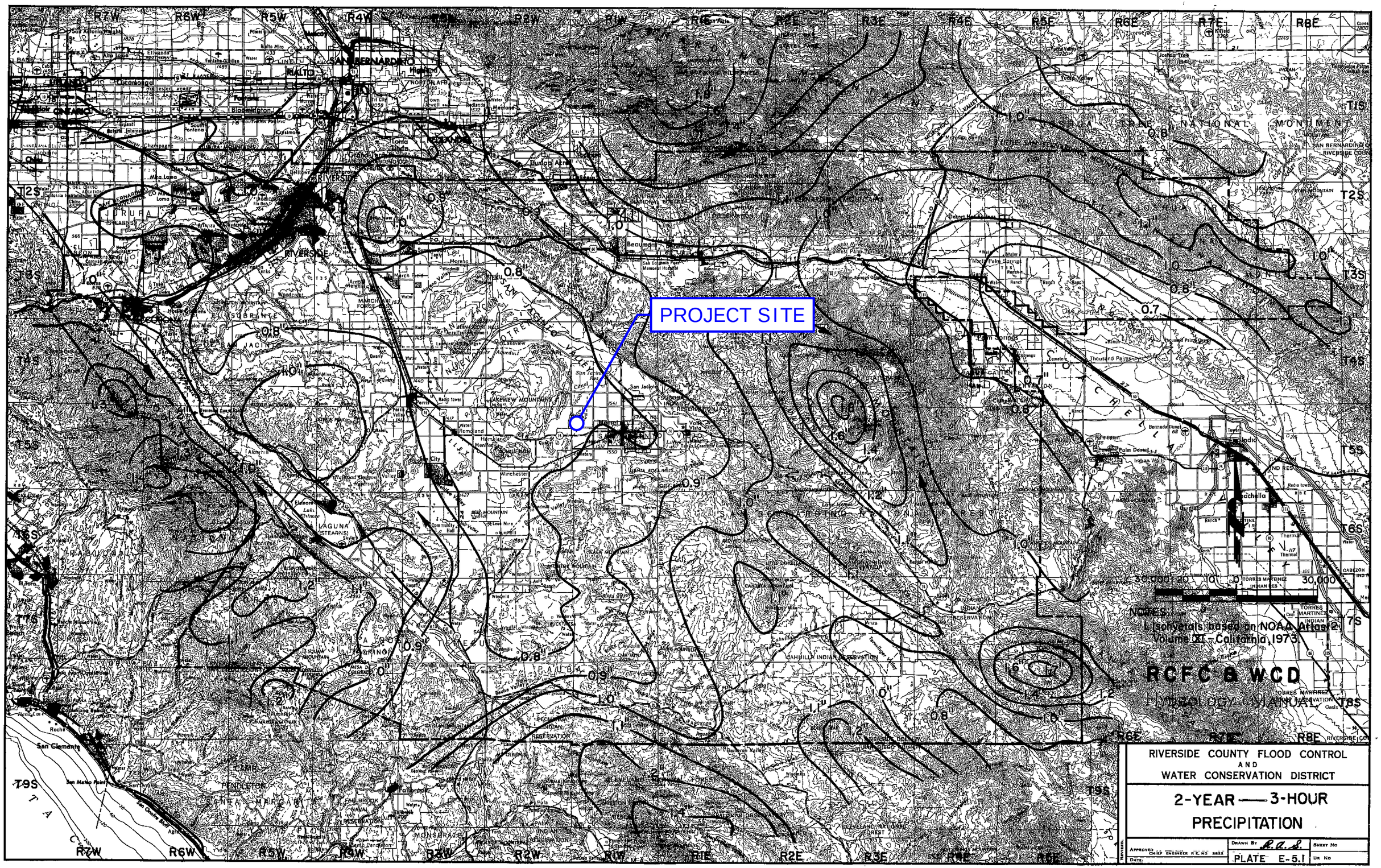


RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100-YEAR — 1-HOUR PRECIPITATION

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DATE	PLATE D-4.4	DR NO

REVISED



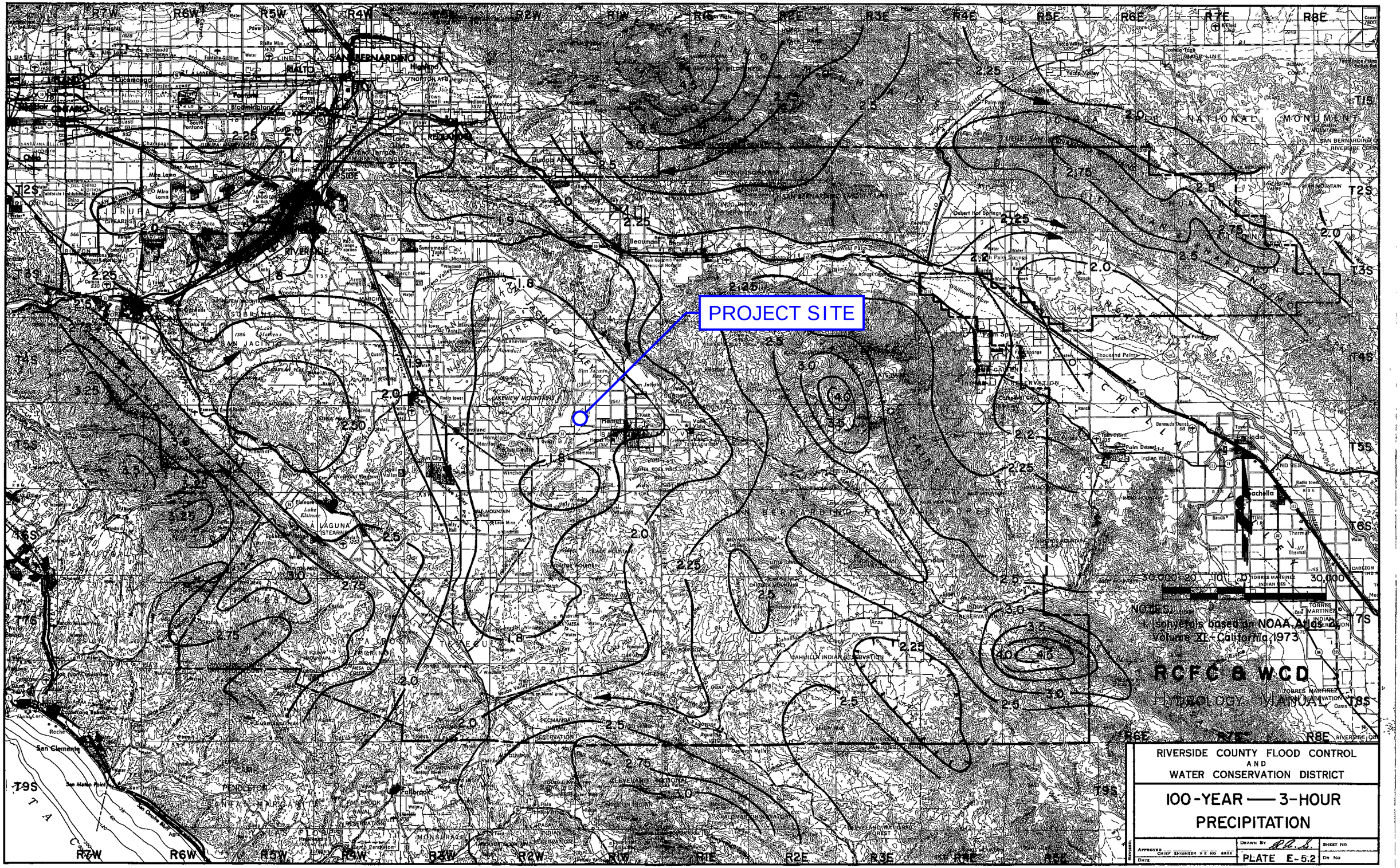
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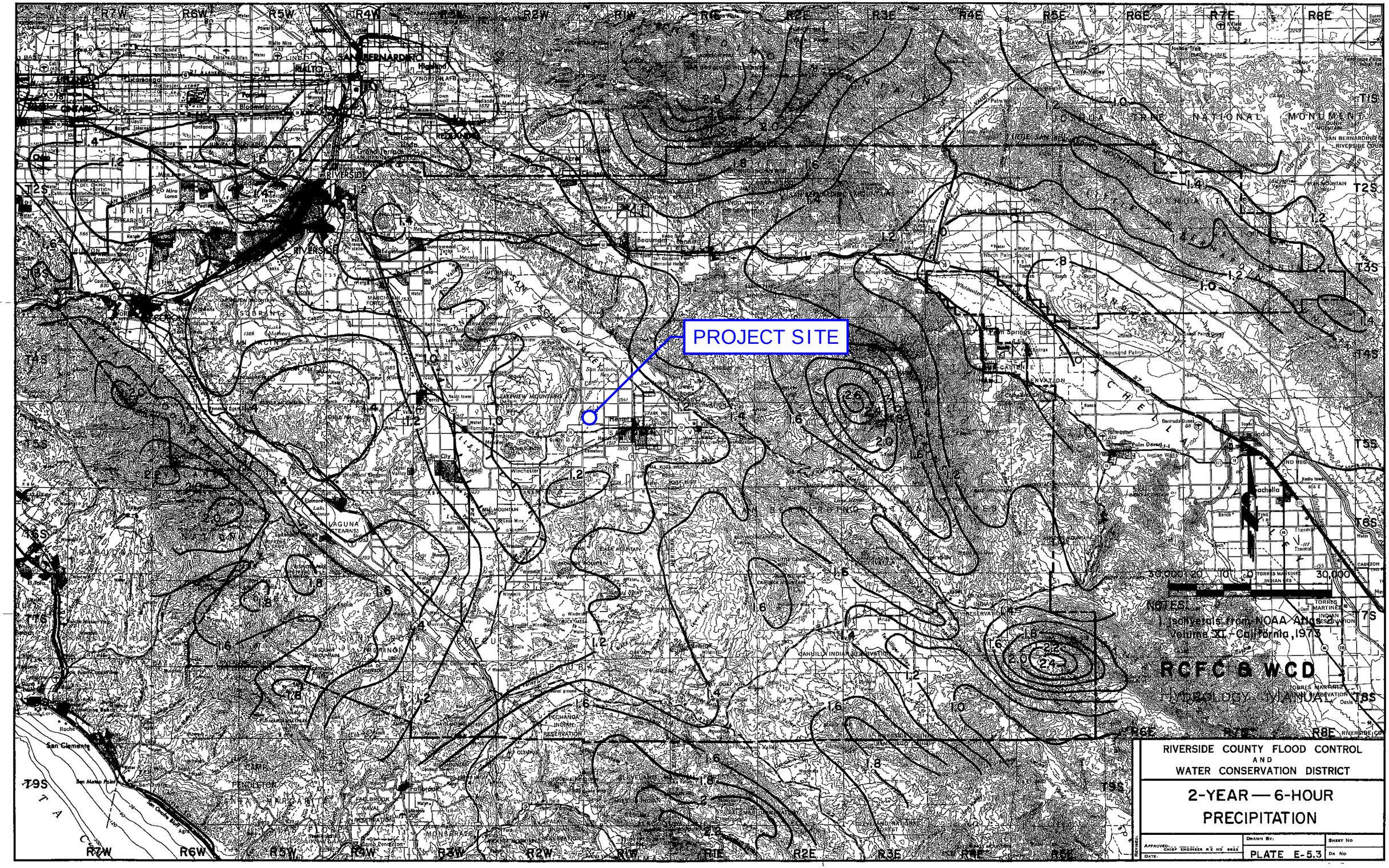
RCFC & WCD
HYDROLOGY MANUAL

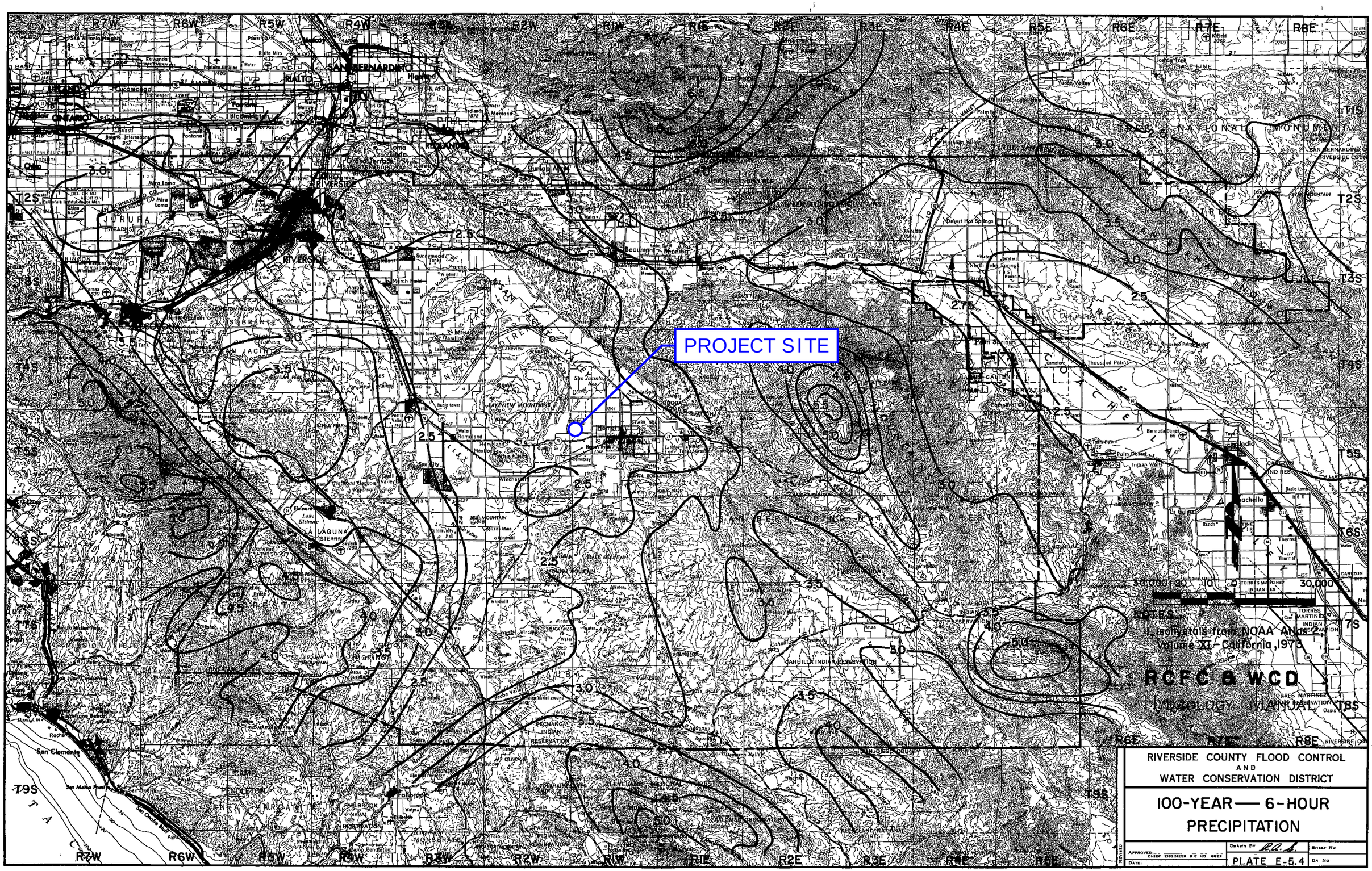
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

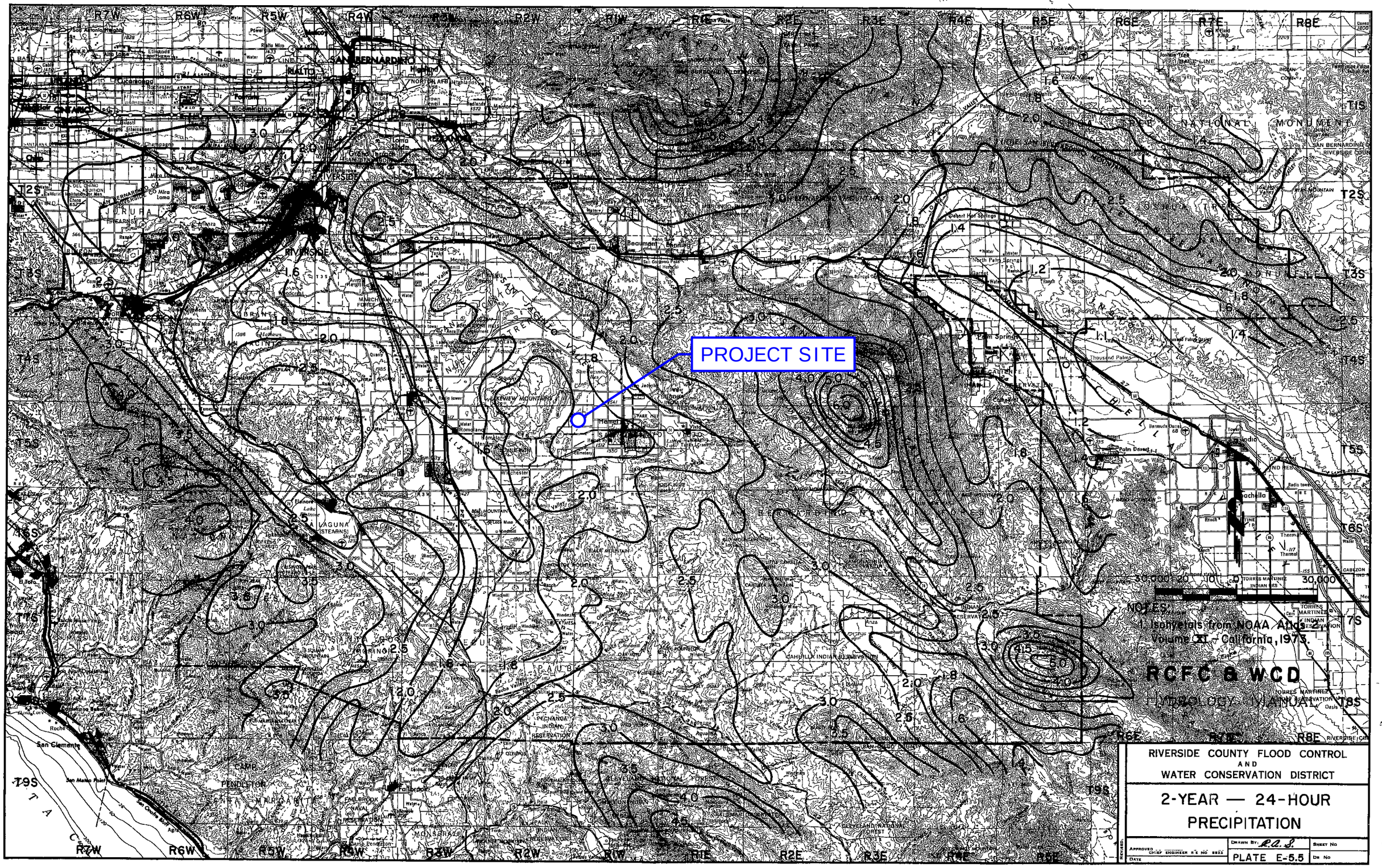
2-YEAR — 3-HOUR PRECIPITATION

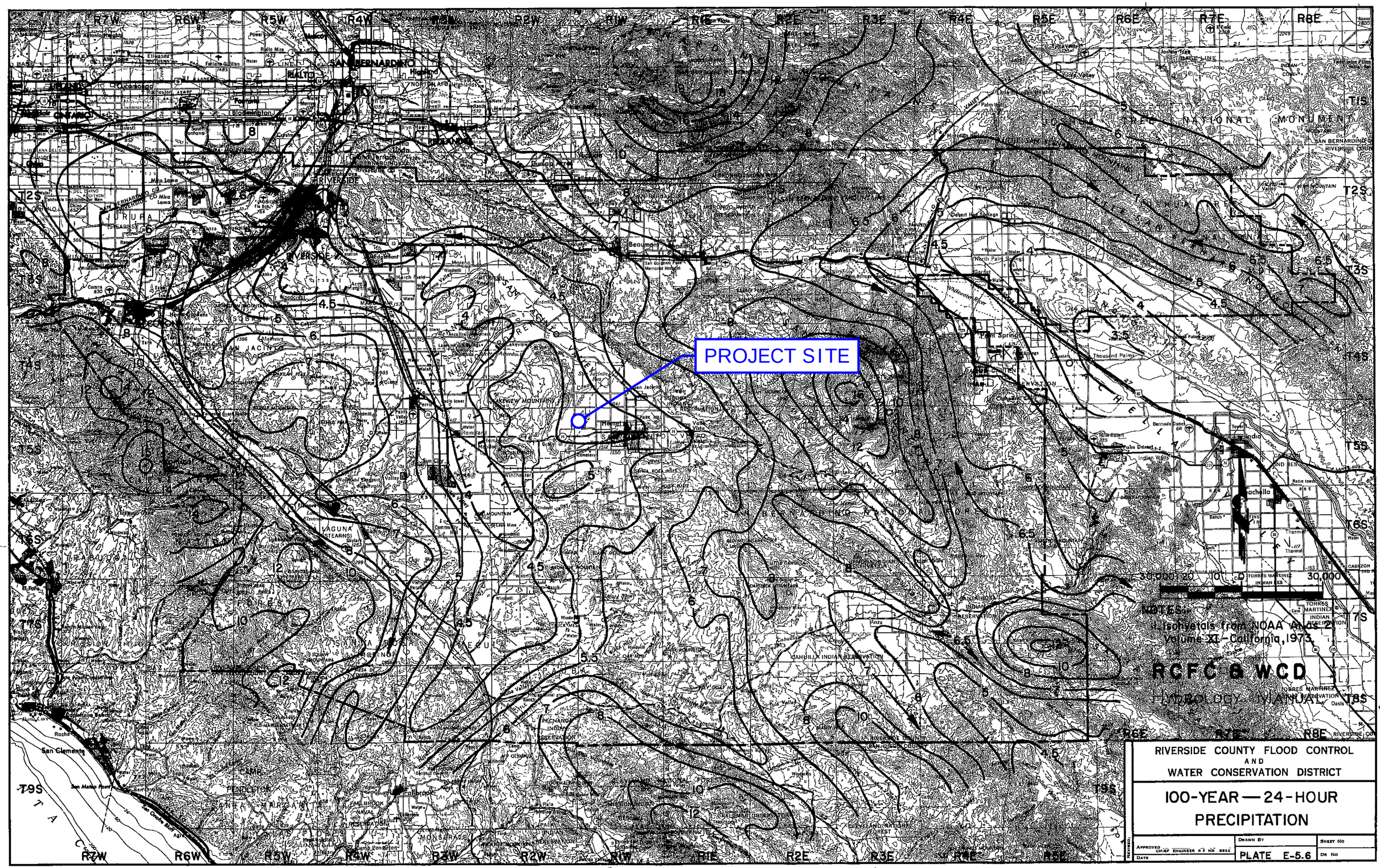
APPROVED CHIEF ENGINEER R.E. NO. 6822 DATE:	DRAWN BY R.A.S.	SHEET NO
REVISED:	PLATE E-5.1	DR NO


PROJECT SITE
NOTES:
1. Isohyetals based on NOAA Atlas 2
Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 3-HOUR
PRECIPITATION
DRAWN BY
SHEET NO
APPROVED CHIEF ENGINEER R.E. NO. 8824
DATE
PLATE E-5.2
DR. NO
REVISED


PROJECT SITE
SAN BERNARDINO
RIVERSIDE
RIALTO
MORENO VALLEY
PERRIS
HEMET
SAN JACINTO
BANNING
BEAUMONT
CALIMESA
CORONA
NORCO
LAKE ELSINORE
MURRIETA
TEMECULA
WILDOMAR
CANYON LAKE
HOMELAND
SAN JACINTO MOUNTAINS
SAN JACINTO WILDERNESS
SAN GORGONIO WILDERNESS
SAN BERNARDINO MOUNTAINS
SAN JACINTO FAULT
SAN ANDREAS FAULT
AGUANGA
TEMECULA VALLEY
PERRIS VALLEY
SAN JACINTO VALLEY
MARCH AFB
MARCH FORCE
CAMP PENDLETON
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
SAN DIEGO COUNTY
ORANGE COUNTY
LOS ANGELES COUNTY
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S
T10S
T11S
T12S
T13S
T14S
T15S
T16S
T17S
T18S
30,000 0 30,000
NOTES
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 6-HOUR PRECIPITATION
DRAWN BY:
SHEET NO
APPROVED CHIEF ENGINEER R.E. NO. 6822
PLATE E-5.3
DATE:
DR. NO
REVISED:


PROJECT SITE
Isohyetals from NOAA Atlas 2,
Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 6-HOUR
PRECIPITATION
APPROVED: CHIEF ENGINEER R.E. NO. 6822
DATE:
DRAWN BY R.C.L.
PLATE E-5.4
SHEET NO
DR NO


PROJECT SITE
SAN BERNARDINO
RIVERSIDE
RIALTO
NORTON AFB
MARCH AFB
SAN JACINTO MOUNTAINS
SAN JACINTO RIVER
SANTA ANA RIVER
TEMECULA
MURRIETA
PECHANGA INDIAN RESERVATION
CAHUILLA INDIAN RESERVATION
AGUANGA INDIAN RESERVATION
SANTA ROSA MOUNTAINS
LAGUNA MOUNTAINS
CAMP PENDLETON
San Clemente
Fallbrook
Palm Springs
Desert Hot Springs
Beaumont
Banning
Indio
Coachella
R7W R6W R5W R4W R3W R2W R1W R1E R2E R3E R4E R5E R6E R7E R8E
T2S T3S T4S T5S T6S T7S T8S
1.6 1.8 2.0 2.5 3.0 3.5 4.0 4.5 5.0 6.0
NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 24-HOUR PRECIPITATION
DRAWN BY: R.A.S.
SHEET No
PLATE E-5.5
DR No
APPROVED CHIEF ENGINEER R.E. NO. 8825
DATE
REVISED

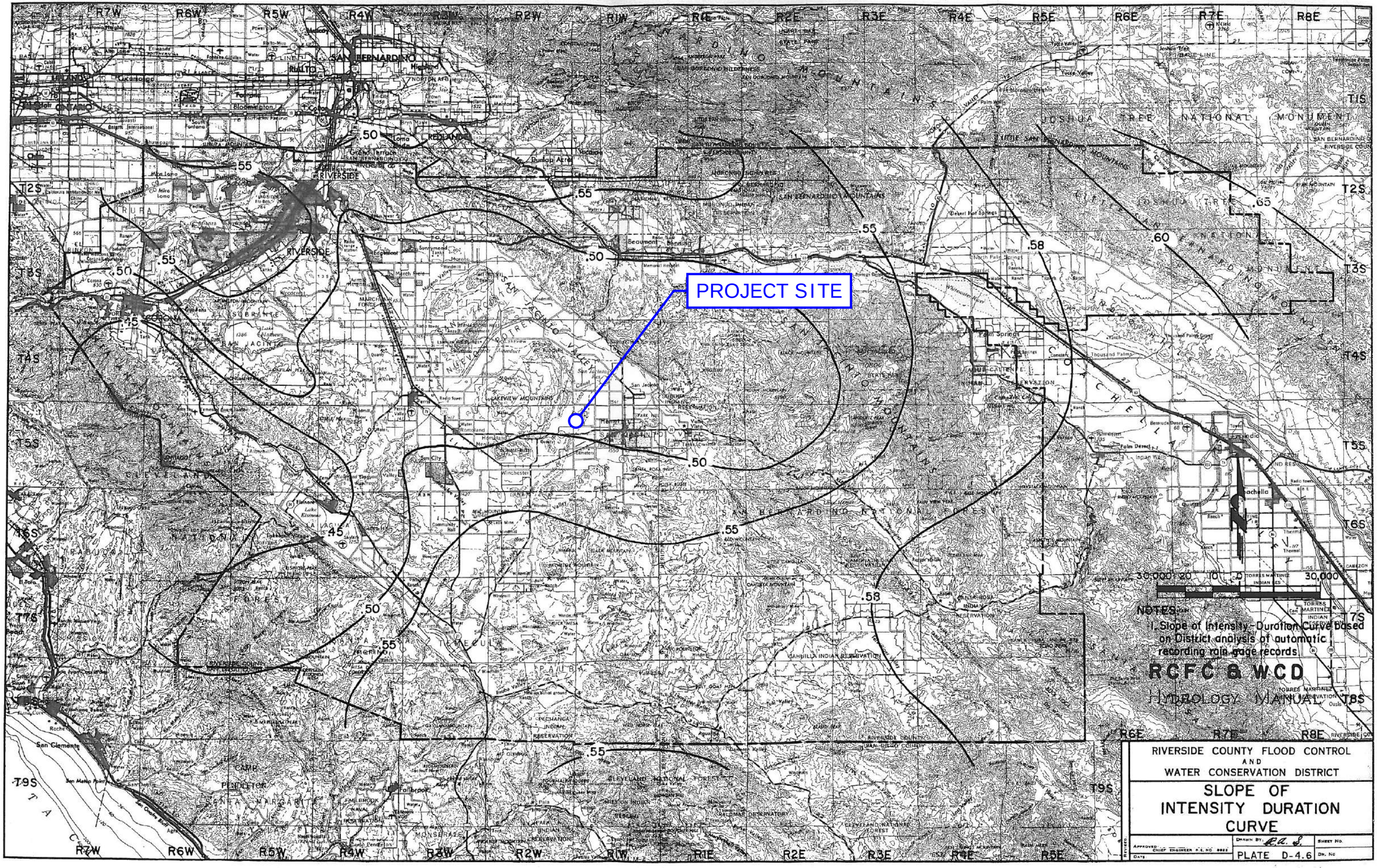


RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100-YEAR — 24-HOUR PRECIPITATION

APPROVED CHIEF ENGINEER R.E. NO. 8882	DRAWN BY	SHEET NO
DATE	PLATE E-5.6	DR NO

REVISED


PROJECT SITE
.50
.55
.58
.60
.63
.45
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S
SAN BERNARDINO
RIVERSIDE
RIALTO
REDLANDS
Loma Linda
Grand Terrace
Colton
Bunker Hill
Beaumont
Banning
Desert Hot Springs
North Palm Springs
Palm Springs
Cathedral City
Rancho Mirage
Thousand Palms
Indio
Coachella
Palm Desert
Indian Wells
La Quinta
Yucca Valley
Joshua Tree
Twentynine Palms
Morongo Valley
Yucaipa
Calimesa
Moreno Valley
March Field
Sunnymead
Edgemont
Mira Loma
Jurupa
Norco
Corona
Lake Elsinore
Temecula
Murrieta
Winchester
Hemet
San Jacinto
Perris
Menifee
Valle Vista
Homeland
Romoldand
Sun City
Quail Valley
Elsinore
Wildomar
Lake Mathews
Lake Perris
Lake Skinner
Diamond Valley Lake
Vail Lake
Domenigoni Valley
Box Spring Mountains
San Bernardino Mountains
San Jacinto Mountains
Santa Rosa Mountains
Lake Mountains
Eagle Mountain
Little San Bernardino Mountains
Pinyon Mountain
Black Mountain
Double Peak
Santa Ana River
San Jacinto River
Whitewater River
Coachella Valley
Salton Sea
Cabazon
Torres Martinez Indian Reservation
Cahuilla Indian Reservation
Santa Rosa Indian Reservation
Pechanga Indian Reservation
Soboba Indian Reservation
Morongo Indian Reservation
Agua Caliente Indian Reservation
Joshua Tree National Monument
San Bernardino National Forest
Cleveland National Forest
Santa Ana Mountains
Santa Ana Canyon
Santa Margarita River
Temecula Creek
Murrieta Creek
Warm Springs Creek
Aguanga
Warner Springs
Fallbrook
Camp Pendleton
Camp Joseph H. Pendleton
Marine Corps Base
Naval Weapons Station
Fallbrook Naval Annex
San Mateo Point
San Onofre Bluff
San Clemente
Dana Point
Capistrano Beach
Mission Viejo
Rancho Santa Margarita
Lake Forest
El Toro
Irvine
Tustin
Orange
Anaheim
Yorba Linda
Brea
Fullerton
Placentia
Chino
Ontario
Upland
Montclair
Pomona
Claremont
Glendora
San Dimas
La Verne
Azusa
Duarte
Monrovia
Arcadia
Sierra Madre
Altadena
Pasadena
San Marino
South Pasadena
Alhambra
San Gabriel
Rosemead
El Monte
South El Monte
Baldwin Park
Irwindale
West Covina
Covina
Glendora

RATIONAL METHOD MODELS ..... B

- B.1 – Existing Area “XA”
- B.2 – Existing Area “XB”
- B.3 – Existing Area “XC”
- B.4 – Proposed “A” (Basin A Tributary)
- B.5 – Proposed Area “B & C” Combined (Basin B Tributary)
- B.6 – Offsite Area “B”
- B.7 – Offsite Area “D”
- B.8 – Offsite Area “E”
- B.9 – Offsite Area “F”

B.1 – EXISTING RATIONAL METHOD ANALYSIS, 100-YEAR AREA "XA"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 07/09/25 File:xa.out

TRACT 31513 "TRES CERRITOS"
EXISTING RATIONAL METHOD ANALYSIS
AREA "XA" (WEST)
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 992.000(Ft.)
Top (of initial area) elevation = 1976.000(Ft.)
Bottom (of initial area) elevation = 1672.000(Ft.)
Difference in elevation = 304.000(Ft.)
Slope = 0.30645 s(percent)= 30.65
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.607 min.
Rainfall intensity = 2.854(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.881
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3) = 95.60
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 16.269(CFS)
Total initial stream area = 6.470(Ac.)
Pervious area fraction = 1.000

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
Top of natural channel elevation =   1672.000(Ft.)
End of natural channel elevation =   1502.700(Ft.)
Length of natural channel  =  5722.000(Ft.)
Estimated mean flow rate at midpoint of channel =    139.782(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   9.04(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0296
Corrected/adjusted channel slope =  0.0296
Travel time =   10.55 min.     TC =   21.16  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.837
Decimal fraction soil group A = 0.400
Decimal fraction soil group B = 0.200
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.400
RI index for soil(AMC 3)  =  89.80
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.021(In/Hr) for a   100.0 year storm
Subarea runoff =    166.196(CFS) for     98.240(Ac.)
Total runoff =    182.465(CFS)  Total area =     104.710(Ac.)
End of computations, total study area =          104.71 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  78.7
```

B.2 – EXISTING RATIONAL METHOD ANALYSIS, 100-YEAR AREA "XB"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 07/09/25 File:xb100.out

TRACT 31513 "TRES CERRITOS"
EXISTING RATIONAL METHOD ANALYSIS
AREA "XB" (EAST)
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++

Process from Point/Station 200.000 to Point/Station 201.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 802.000(Ft.)
Top (of initial area) elevation = 1880.000(Ft.)
Bottom (of initial area) elevation = 1580.000(Ft.)
Difference in elevation = 300.000(Ft.)
Slope = 0.37406 s(percent)= 37.41
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.362 min.
Rainfall intensity = 3.038(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.882
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3) = 95.60
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 10.184(CFS)
Total initial stream area = 3.800(Ac.)
Pervious area fraction = 1.000

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
Top of natural channel elevation =   1580.000(Ft.)
End of natural channel elevation =   1503.200(Ft.)
Length of natural channel  =  1716.000(Ft.)
Estimated mean flow rate at midpoint of channel =     31.235(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   7.16(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0448
Corrected/adjusted channel slope =  0.0448
Travel time =    3.99 min.     TC =   13.35  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.870
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.200
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.700
RI index for soil(AMC 3)  =  93.76
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.544(In/Hr) for a   100.0 year storm
Subarea runoff =     34.752(CFS) for     15.710(Ac.)
Total runoff =     44.936(CFS)  Total area =      19.510(Ac.)
End of computations, total study area =           19.51 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  85.5
```

B.3 – EXISTING RATIONAL METHOD ANALYSIS, 100-YEAR AREA "XC"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 07/09/25 File:xc100.out

TRACT 31513 "TRES CERRITOS"
EXISTING RATIONAL METHOD ANALYSIS
AREA "XC" (VERNAL POOLS TRIBUTARY)
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++

Process from Point/Station 300.000 to Point/Station 301.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 714.000(Ft.)
Top (of initial area) elevation = 1922.000(Ft.)
Bottom (of initial area) elevation = 1557.000(Ft.)
Difference in elevation = 365.000(Ft.)
Slope = 0.51120 s(percent)= 51.12
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.395 min.
Rainfall intensity = 3.208(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.883
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3) = 95.60
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 5.609(CFS)
Total initial stream area = 1.980(Ac.)
Pervious area fraction = 1.000

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
Top of natural channel elevation =   1557.000(Ft.)
End of natural channel elevation =   1502.300(Ft.)
Length of natural channel  =  2475.000(Ft.)
Estimated mean flow rate at midpoint of channel =     60.259(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   6.07(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0221
Corrected/adjusted channel slope =  0.0221
Travel time =    6.79 min.     TC =   15.19  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.841
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.150
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.350
RI index for soil(AMC 3)  =  88.81
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.385(In/Hr) for a   100.0 year storm
Subarea runoff =     77.370(CFS) for     38.580(Ac.)
Total runoff =     82.980(CFS)  Total area =      40.560(Ac.)
End of computations, total study area =           40.56 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  77.0
```

B.4 – RATIONAL METHOD ANALYSIS, 100-YEAR AREA "A"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 07/08/25 File:da100.out

TRACT 31513 "TRES CERRITOS"
DEVELOPED CONDITION
AREA "A"
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++

Process from Point/Station 1.000 to Point/Station 1.010
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1658.000(Ft.)
Bottom (of initial area) elevation = 1552.100(Ft.)
Difference in elevation = 105.900(Ft.)
Slope = 0.10590 s(percent)= 10.59
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.430 min.
Rainfall intensity = 2.878(In/Hr) for a 100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.738
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3) = 52.00
Pervious area fraction = 0.600; Impervious fraction = 0.400
Initial subarea runoff = 2.125(CFS)
Total initial stream area = 1.000(Ac.)
Pervious area fraction = 0.600

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.010 to Point/Station        1.020
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
Top of street segment elevation =  1552.100(Ft.)
End of street segment elevation =  1511.400(Ft.)
Length of street segment  =   782.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      5.522(CFS)
Depth of flow =   0.322(Ft.), Average velocity =   5.098(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.780(Ft.)
Flow velocity =   5.10(Ft/s)
Travel time =    2.56 min.     TC =   12.99  min.
 Adding area flow to street
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.755
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Rainfall intensity =      2.579(In/Hr) for a   100.0 year storm
Subarea runoff =      6.715(CFS) for      3.450(Ac.)
Total runoff =      8.840(CFS)  Total area =       4.450(Ac.)
Street flow at end of street =      8.840(CFS)
Half street flow at end of street =      8.840(CFS)
Depth of flow =   0.366(Ft.), Average velocity =   5.685(Ft/s)
Flow width (from curb towards crown)=  11.951(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.020 to Point/Station        1.030
**** PIPEFLOW TRAVEL TIME (User specified size) ****
_____________________________________________________________________________
Upstream point/station elevation =  1506.400(Ft.)
Downstream point/station elevation =  1505.200(Ft.)
Pipe length  =    21.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     8.840(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     8.840(CFS)
Normal flow depth in pipe =    7.37(In.)
Flow top width inside pipe =   17.70(In.)
Critical Depth =   13.81(In.)
Pipe flow velocity =     12.97(Ft/s)
Travel time through pipe =    0.03 min.
Time of concentration (TC) =    13.01 min.
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.020 to Point/Station        1.030
**** CONFLUENCE OF MAIN STREAMS ****
____________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      4.450(Ac.)
Runoff from this stream =      8.840(CFS)
Time of concentration =   13.01 min.
Rainfall intensity =     2.577(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.040 to Point/Station        1.050
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
Initial area flow distance =   166.000(Ft.)
Top (of initial area) elevation =  1551.800(Ft.)
Bottom (of initial area) elevation =  1543.100(Ft.)
Difference in elevation =     8.700(Ft.)
Slope =    0.05241  s(percent)=       5.24
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.157 min.
Rainfall intensity =      4.093(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.827
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      1.016(CFS)
Total initial stream area =        0.300(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        1.050 to Point/Station        1.060
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
____________________________________________________________________________
Top of street segment elevation =  1543.100(Ft.)
End of street segment elevation =  1511.400(Ft.)
Length of street segment  =   620.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      4.012(CFS)
Depth of flow =   0.297(Ft.), Average velocity =   4.714(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   8.511(Ft.)
Flow velocity =   4.71(Ft/s)
```

```
Travel time =    2.19 min.     TC =    7.35  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.817
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      3.429(In/Hr) for a   100.0 year storm
Subarea runoff =      5.909(CFS) for      2.110(Ac.)
Total runoff =      6.925(CFS)  Total area =       2.410(Ac.)
Street flow at end of street =      6.925(CFS)
Half street flow at end of street =      6.925(CFS)
Depth of flow =   0.343(Ft.), Average velocity =   5.333(Ft/s)
Flow width (from curb towards crown)=  10.825(Ft.)


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Process from Point/Station        1.060 to Point/Station        1.030
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1506.400(Ft.)
Downstream point/station elevation =  1505.200(Ft.)
Pipe length  =    30.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     6.925(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     6.925(CFS)
Normal flow depth in pipe =    7.11(In.)
Flow top width inside pipe =   17.60(In.)
Critical Depth =   12.22(In.)
Pipe flow velocity =     10.66(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =     7.40 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.060 to Point/Station        1.030
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.410(Ac.)
Runoff from this stream =      6.925(CFS)
Time of concentration =    7.40 min.
Rainfall intensity =     3.418(In/Hr)
Summary of stream data:

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


1        8.840     13.01                2.577
2        6.925      7.40                3.418
Largest stream flow has longer time of concentration
Qp =      8.840 + sum of
          Qb         Ia/Ib
           6.925 *    0.754 =      5.221
Qp =     14.061

Total of 2 main streams to confluence:
Flow rates before confluence point:
```

```
       8.840       6.925
Area of streams before confluence:
        4.450        2.410


Results of confluence:
Total flow rate =     14.061(CFS)
Time of concentration =    13.013 min.
Effective stream area after confluence  =      6.860(Ac.)


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Process from Point/Station        1.030 to Point/Station        1.070
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1505.200(Ft.)
Downstream point/station elevation =  1501.600(Ft.)
Pipe length  =   306.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    14.061(CFS)
Given pipe size =     24.00(In.)
Calculated individual pipe flow  =    14.061(CFS)
Normal flow depth in pipe =   13.03(In.)
Flow top width inside pipe =   23.91(In.)
Critical Depth =   16.22(In.)
Pipe flow velocity =      8.08(Ft/s)
Travel time through pipe =    0.63 min.
Time of concentration (TC) =    13.64 min.


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Process from Point/Station        1.030 to Point/Station        1.070
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      6.860(Ac.)
Runoff from this stream =     14.061(CFS)
Time of concentration =   13.64 min.
Rainfall intensity =     2.516(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        1.040 to Point/Station        1.080
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   423.000(Ft.)
Top (of initial area) elevation =  1551.800(Ft.)
Bottom (of initial area) elevation =  1523.300(Ft.)
Difference in elevation =    28.500(Ft.)
Slope =    0.06738  s(percent)=       6.74
TC = k(0.940)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   18.112 min.
Rainfall intensity =      2.184(In/Hr) for a   100.0 year storm
UNDEVELOPED (good cover) subarea
Runoff Coefficient = 0.624
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  58.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      2.549(CFS)
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Total initial stream area =        1.870(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station        1.080 to Point/Station        1.090
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of street segment elevation =  1523.300(Ft.)
End of street segment elevation =  1507.400(Ft.)
Length of street segment  =   610.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      4.541(CFS)
Depth of flow =   0.335(Ft.), Average velocity =   3.734(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  10.438(Ft.)
Flow velocity =   3.73(Ft/s)
Travel time =    2.72 min.     TC =   20.83  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.781
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      2.036(In/Hr) for a   100.0 year storm
Subarea runoff =      4.057(CFS) for      2.550(Ac.)
Total runoff =      6.606(CFS)  Total area =       4.420(Ac.)
Street flow at end of street =      6.606(CFS)
Half street flow at end of street =      6.606(CFS)
Depth of flow =   0.371(Ft.), Average velocity =   4.075(Ft/s)
Flow width (from curb towards crown)=  12.225(Ft.)


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Process from Point/Station        1.090 to Point/Station        1.070
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1503.400(Ft.)
Downstream point/station elevation =  1501.600(Ft.)
Pipe length  =    28.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     6.606(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     6.606(CFS)
Normal flow depth in pipe =    6.11(In.)
Flow top width inside pipe =   17.05(In.)
Critical Depth =   11.94(In.)
Pipe flow velocity =     12.50(Ft/s)
Travel time through pipe =    0.04 min.
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Time of concentration (TC) =    20.87 min.


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Process from Point/Station        1.090 to Point/Station        1.070
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      4.420(Ac.)
Runoff from this stream =      6.606(CFS)
Time of concentration =   20.87 min.
Rainfall intensity =     2.035(In/Hr)
Program is now starting with Main Stream No. 3


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Process from Point/Station        1.100 to Point/Station        1.110
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   203.000(Ft.)
Top (of initial area) elevation =  1539.500(Ft.)
Bottom (of initial area) elevation =  1509.800(Ft.)
Difference in elevation =    29.700(Ft.)
Slope =    0.14631  s(percent)=      14.63
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Warning: TC computed to be less than 5 min.; program is assuming the
time of concentration is 5 minutes.
Initial area time of concentration =    5.000 min.
Rainfall intensity =      4.157(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.797
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      0.795(CFS)
Total initial stream area =        0.240(Ac.)
Pervious area fraction = 0.500


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Process from Point/Station        1.110 to Point/Station        1.120
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of street segment elevation =  1509.800(Ft.)
End of street segment elevation =  1507.400(Ft.)
Length of street segment  =   259.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
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Estimated mean flow rate at midpoint of street =      2.436(CFS)
Depth of flow =   0.326(Ft.), Average velocity =   2.173(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.971(Ft.)
Flow velocity =   2.17(Ft/s)
Travel time =    1.99 min.     TC =    6.99  min.
 Adding area flow to street
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.783
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Rainfall intensity =      3.517(In/Hr) for a   100.0 year storm
Subarea runoff =      3.195(CFS) for      1.160(Ac.)
Total runoff =      3.991(CFS)  Total area =       1.400(Ac.)
Street flow at end of street =      3.991(CFS)
Half street flow at end of street =      3.991(CFS)
Depth of flow =   0.372(Ft.), Average velocity =   2.437(Ft/s)
Flow width (from curb towards crown)=  12.291(Ft.)


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Process from Point/Station        1.120 to Point/Station        1.070
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1503.400(Ft.)
Downstream point/station elevation =  1501.600(Ft.)
Pipe length  =    18.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.991(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     3.991(CFS)
Normal flow depth in pipe =    4.21(In.)
Flow top width inside pipe =   15.24(In.)
Critical Depth =    9.18(In.)
Pipe flow velocity =     12.68(Ft/s)
Travel time through pipe =    0.02 min.
Time of concentration (TC) =     7.01 min.


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Process from Point/Station        1.120 to Point/Station        1.070
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      1.400(Ac.)
Runoff from this stream =      3.991(CFS)
Time of concentration =    7.01 min.
Rainfall intensity =     3.511(In/Hr)
Summary of stream data:

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


1       14.061     13.64                2.516
2        6.606     20.87                2.035
3        3.991      7.01                3.511
Largest stream flow has longer or shorter time of concentration
Qp =     14.061 + sum of
```

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          Qa          Tb/Ta
           6.606 *    0.654 =      4.319
          Qb         Ia/Ib
           3.991 *    0.717 =      2.861
Qp =     21.240

Total of 3 main streams to confluence:
Flow rates before confluence point:
      14.061       6.606       3.991
Area of streams before confluence:
        6.860        4.420        1.400


Results of confluence:
Total flow rate =     21.240(CFS)
Time of concentration =    13.645 min.
Effective stream area after confluence  =     12.680(Ac.)


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Process from Point/Station        1.070 to Point/Station        1.130
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1501.600(Ft.)
Downstream point/station elevation =  1499.000(Ft.)
Pipe length  =   505.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    21.240(CFS)
Given pipe size =     30.00(In.)
Calculated individual pipe flow  =    21.240(CFS)
Normal flow depth in pipe =   18.89(In.)
Flow top width inside pipe =   28.97(In.)
Critical Depth =   18.80(In.)
Pipe flow velocity =      6.53(Ft/s)
Travel time through pipe =    1.29 min.
Time of concentration (TC) =    14.93 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.070 to Point/Station        1.130
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     12.680(Ac.)
Runoff from this stream =     21.240(CFS)
Time of concentration =   14.93 min.
Rainfall intensity =     2.405(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.140 to Point/Station        1.150
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   260.000(Ft.)
Top (of initial area) elevation =  1515.500(Ft.)
Bottom (of initial area) elevation =  1508.300(Ft.)
Difference in elevation =     7.200(Ft.)
Slope =    0.02769  s(percent)=       2.77
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.684 min.
Rainfall intensity =      3.899(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
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Runoff Coefficient = 0.878
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      0.651(CFS)
Total initial stream area =        0.190(Ac.)
Pervious area fraction = 0.100


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Process from Point/Station        1.150 to Point/Station        1.160
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1508.300(Ft.)
End of street segment elevation =  1506.100(Ft.)
Length of street segment  =   368.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      3.466(CFS)
Depth of flow =   0.381(Ft.), Average velocity =   1.994(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  12.693(Ft.)
Flow velocity =   1.99(Ft/s)
Travel time =    3.08 min.     TC =    8.76  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.820
Decimal fraction soil group A = 0.850
Decimal fraction soil group B = 0.150
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  55.60
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      3.141(In/Hr) for a   100.0 year storm
Subarea runoff =      5.564(CFS) for      2.160(Ac.)
Total runoff =      6.215(CFS)  Total area =       2.350(Ac.)
Street flow at end of street =      6.215(CFS)
Half street flow at end of street =      6.215(CFS)
Depth of flow =   0.448(Ft.), Average velocity =   2.294(Ft/s)
Flow width (from curb towards crown)=  16.070(Ft.)


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Process from Point/Station        1.160 to Point/Station        1.130
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1502.100(Ft.)
Downstream point/station elevation =  1499.000(Ft.)
Pipe length  =    27.00(Ft.)   Manning's N = 0.013
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No. of pipes = 1  Required pipe flow  =     6.215(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     6.215(CFS)
Normal flow depth in pipe =    5.09(In.)
Flow top width inside pipe =   16.21(In.)
Critical Depth =   11.56(In.)
Pipe flow velocity =     15.13(Ft/s)
Travel time through pipe =    0.03 min.
Time of concentration (TC) =     8.79 min.


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Process from Point/Station        1.160 to Point/Station        1.130
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.350(Ac.)
Runoff from this stream =      6.215(CFS)
Time of concentration =    8.79 min.
Rainfall intensity =     3.135(In/Hr)
Summary of stream data:

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


1       21.240     14.93                 2.405
2        6.215      8.79                 3.135
Largest stream flow has longer time of concentration
Qp =     21.240 + sum of
          Qb         Ia/Ib
           6.215 *    0.767 =      4.768
Qp =     26.008

Total of 2 main streams to confluence:
Flow rates before confluence point:
      21.240       6.215
Area of streams before confluence:
       12.680        2.350


Results of confluence:
Total flow rate =     26.008(CFS)
Time of concentration =    14.934 min.
Effective stream area after confluence  =     15.030(Ac.)


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Process from Point/Station        1.130 to Point/Station        1.170
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1499.000(Ft.)
Downstream point/station elevation =  1498.300(Ft.)
Pipe length  =    67.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    26.008(CFS)
Given pipe size =     30.00(In.)
Calculated individual pipe flow  =    26.008(CFS)
Normal flow depth in pipe =   17.11(In.)
Flow top width inside pipe =   29.70(In.)
Critical Depth =   20.86(In.)
Pipe flow velocity =      9.00(Ft/s)
Travel time through pipe =    0.12 min.
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Time of concentration (TC) =    15.06 min.


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Process from Point/Station        1.130 to Point/Station        1.170
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     15.030(Ac.)
Runoff from this stream =     26.008(CFS)
Time of concentration =   15.06 min.
Rainfall intensity =     2.395(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        1.180 to Point/Station        1.190
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   131.000(Ft.)
Top (of initial area) elevation =  1531.500(Ft.)
Bottom (of initial area) elevation =  1529.400(Ft.)
Difference in elevation =     2.100(Ft.)
Slope =    0.01603  s(percent)=       1.60
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.945 min.
Rainfall intensity =      3.812(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.823
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.471(CFS)
Total initial stream area =        0.150(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        1.190 to Point/Station        1.200
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1529.400(Ft.)
End of street segment elevation =  1510.000(Ft.)
Length of street segment  =  1169.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      6.043(CFS)
Depth of flow =   0.385(Ft.), Average velocity =   3.359(Ft/s)
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Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  12.933(Ft.)
Flow velocity =   3.36(Ft/s)
Travel time =    5.80 min.     TC =   11.75  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.802
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      2.712(In/Hr) for a   100.0 year storm
Subarea runoff =     11.045(CFS) for      5.080(Ac.)
Total runoff =     11.516(CFS)  Total area =       5.230(Ac.)
Street flow at end of street =     11.516(CFS)
Half street flow at end of street =     11.516(CFS)
Depth of flow =   0.462(Ft.), Average velocity =   3.922(Ft/s)
Flow width (from curb towards crown)=  16.762(Ft.)


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Process from Point/Station        1.200 to Point/Station        1.210
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1506.500(Ft.)
Downstream point/station elevation =  1506.100(Ft.)
Pipe length  =    49.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    11.516(CFS)
Given pipe size =     24.00(In.)
Calculated individual pipe flow  =    11.516(CFS)
Normal flow depth in pipe =   12.89(In.)
Flow top width inside pipe =   23.93(In.)
Critical Depth =   14.61(In.)
Pipe flow velocity =      6.70(Ft/s)
Travel time through pipe =    0.12 min.
Time of concentration (TC) =    11.87 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.200 to Point/Station        1.210
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      5.230(Ac.)
Runoff from this stream =     11.516(CFS)
Time of concentration =   11.87 min.
Rainfall intensity =     2.698(In/Hr)


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Process from Point/Station        1.220 to Point/Station        1.230
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   131.000(Ft.)
Top (of initial area) elevation =  1515.500(Ft.)
Bottom (of initial area) elevation =  1513.100(Ft.)
Difference in elevation =     2.400(Ft.)
Slope =    0.01832  s(percent)=       1.83
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.788 min.
Rainfall intensity =      3.864(In/Hr) for a   100.0 year storm
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CONDOMINIUM subarea type
Runoff Coefficient = 0.824
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.509(CFS)
Total initial stream area =        0.160(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        1.230 to Point/Station        1.210
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1513.100(Ft.)
End of street segment elevation =  1510.300(Ft.)
Length of street segment  =   493.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      3.533(CFS)
Depth of flow =   0.385(Ft.), Average velocity =   1.964(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  12.929(Ft.)
Flow velocity =   1.96(Ft/s)
Travel time =    4.18 min.     TC =    9.97  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.808
Decimal fraction soil group A = 0.990
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.010
RI index for soil(AMC 3)  =  52.43
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      2.944(In/Hr) for a   100.0 year storm
Subarea runoff =      5.972(CFS) for      2.510(Ac.)
Total runoff =      6.481(CFS)  Total area =       2.670(Ac.)
Street flow at end of street =      6.481(CFS)
Half street flow at end of street =      6.481(CFS)
Depth of flow =   0.457(Ft.), Average velocity =   2.273(Ft/s)
Flow width (from curb towards crown)=  16.507(Ft.)


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Process from Point/Station        1.230 to Point/Station        1.210
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      2.670(Ac.)
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Runoff from this stream =      6.481(CFS)
Time of concentration =    9.97 min.
Rainfall intensity =     2.944(In/Hr)
Summary of stream data:

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


1       11.516     11.87                 2.698
2        6.481      9.97                 2.944
Largest stream flow has longer time of concentration
Qp =     11.516 + sum of
          Qb         Ia/Ib
           6.481 *    0.917 =      5.941
Qp =     17.457

Total of 2 streams to confluence:
Flow rates before confluence point:
      11.516       6.481
Area of streams before confluence:
        5.230        2.670
Results of confluence:
Total flow rate =     17.457(CFS)
Time of concentration =    11.867 min.
Effective stream area after confluence =      7.900(Ac.)


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Process from Point/Station        1.210 to Point/Station        1.240
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1506.100(Ft.)
Downstream point/station elevation =  1502.300(Ft.)
Pipe length  =   217.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    17.457(CFS)
Given pipe size =     24.00(In.)
Calculated individual pipe flow  =    17.457(CFS)
Normal flow depth in pipe =   13.17(In.)
Flow top width inside pipe =   23.89(In.)
Critical Depth =   18.06(In.)
Pipe flow velocity =      9.90(Ft/s)
Travel time through pipe =    0.37 min.
Time of concentration (TC) =    12.23 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.210 to Point/Station        1.240
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      7.900(Ac.)
Runoff from this stream =     17.457(CFS)
Time of concentration =   12.23 min.
Rainfall intensity =     2.658(In/Hr)


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Process from Point/Station        1.250 to Point/Station        1.260
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   146.000(Ft.)
Top (of initial area) elevation =  1517.000(Ft.)
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Bottom (of initial area) elevation =  1511.500(Ft.)
Difference in elevation =     5.500(Ft.)
Slope =    0.03767  s(percent)=       3.77
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.233 min.
Rainfall intensity =      4.063(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.827
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.605(CFS)
Total initial stream area =        0.180(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        1.260 to Point/Station        1.270
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1511.500(Ft.)
End of street segment elevation =  1508.400(Ft.)
Length of street segment  =   422.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      2.285(CFS)
Depth of flow =   0.331(Ft.), Average velocity =   1.958(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  10.199(Ft.)
Flow velocity =   1.96(Ft/s)
Travel time =    3.59 min.     TC =    8.83  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.828
Decimal fraction soil group A = 0.700
Decimal fraction soil group B = 0.300
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  59.20
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      3.129(In/Hr) for a   100.0 year storm
Subarea runoff =      3.292(CFS) for      1.270(Ac.)
Total runoff =      3.897(CFS)  Total area =       1.450(Ac.)
Street flow at end of street =      3.897(CFS)
Half street flow at end of street =      3.897(CFS)
Depth of flow =   0.382(Ft.), Average velocity =   2.218(Ft/s)
Flow width (from curb towards crown)=  12.768(Ft.)
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Process from Point/Station        1.270 to Point/Station        1.240
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1504.400(Ft.)
Downstream point/station elevation =  1502.300(Ft.)
Pipe length  =    11.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.897(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     3.897(CFS)
Normal flow depth in pipe =    3.54(In.)
Flow top width inside pipe =   14.32(In.)
Critical Depth =    9.06(In.)
Pipe flow velocity =     15.83(Ft/s)
Travel time through pipe =    0.01 min.
Time of concentration (TC) =     8.84 min.


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Process from Point/Station        1.270 to Point/Station        1.240
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      1.450(Ac.)
Runoff from this stream =      3.897(CFS)
Time of concentration =    8.84 min.
Rainfall intensity =     3.127(In/Hr)
Summary of stream data:

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


1       17.457     12.23                2.658
2        3.897      8.84                3.127
Largest stream flow has longer time of concentration
Qp =     17.457 + sum of
          Qb         Ia/Ib
           3.897 *    0.850 =      3.312
Qp =     20.769

Total of 2 streams to confluence:
Flow rates before confluence point:
      17.457       3.897
Area of streams before confluence:
        7.900        1.450
Results of confluence:
Total flow rate =     20.769(CFS)
Time of concentration =    12.233 min.
Effective stream area after confluence =      9.350(Ac.)


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Process from Point/Station        1.240 to Point/Station        1.280
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1502.300(Ft.)
Downstream point/station elevation =  1501.500(Ft.)
Pipe length  =    40.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    20.769(CFS)
Given pipe size =     24.00(In.)
Calculated individual pipe flow  =    20.769(CFS)
Normal flow depth in pipe =   14.09(In.)
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Flow top width inside pipe =   23.63(In.)
Critical Depth =   19.59(In.)
Pipe flow velocity =     10.84(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =    12.29 min.


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Process from Point/Station        1.240 to Point/Station        1.280
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      9.350(Ac.)
Runoff from this stream =     20.769(CFS)
Time of concentration =   12.29 min.
Rainfall intensity =     2.651(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.290 to Point/Station        1.300
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   136.000(Ft.)
Top (of initial area) elevation =  1513.900(Ft.)
Bottom (of initial area) elevation =  1511.500(Ft.)
Difference in elevation =     2.400(Ft.)
Slope =    0.01765  s(percent)=       1.76
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.919 min.
Rainfall intensity =      3.820(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.834
Decimal fraction soil group A = 0.800
Decimal fraction soil group B = 0.200
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  56.80
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.510(CFS)
Total initial stream area =        0.160(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        1.300 to Point/Station        1.310
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1511.500(Ft.)
End of street segment elevation =  1508.300(Ft.)
Length of street segment  =   433.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
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Estimated mean flow rate at midpoint of street =      2.142(CFS)
Depth of flow =   0.325(Ft.), Average velocity =   1.934(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.906(Ft.)
Flow velocity =   1.93(Ft/s)
Travel time =    3.73 min.     TC =    9.65  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.851
Decimal fraction soil group A = 0.200
Decimal fraction soil group B = 0.800
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  70.96
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      2.992(In/Hr) for a   100.0 year storm
Subarea runoff =      3.210(CFS) for      1.260(Ac.)
Total runoff =      3.720(CFS)  Total area =       1.420(Ac.)
Street flow at end of street =      3.720(CFS)
Half street flow at end of street =      3.720(CFS)
Depth of flow =   0.377(Ft.), Average velocity =   2.199(Ft/s)
Flow width (from curb towards crown)=  12.510(Ft.)


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Process from Point/Station        1.310 to Point/Station        1.280
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1504.300(Ft.)
Downstream point/station elevation =  1501.500(Ft.)
Pipe length  =    21.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.720(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     3.720(CFS)
Normal flow depth in pipe =    3.79(In.)
Flow top width inside pipe =   14.67(In.)
Critical Depth =    8.85(In.)
Pipe flow velocity =     13.75(Ft/s)
Travel time through pipe =    0.03 min.
Time of concentration (TC) =     9.68 min.


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Process from Point/Station        1.310 to Point/Station        1.280
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      1.420(Ac.)
Runoff from this stream =      3.720(CFS)
Time of concentration =    9.68 min.
Rainfall intensity =     2.988(In/Hr)
Summary of stream data:

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


1       20.769     12.29                2.651
2        3.720      9.68                2.988
Largest stream flow has longer time of concentration
Qp =     20.769 + sum of
          Qb         Ia/Ib
           3.720 *    0.887 =      3.300
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```
Qp =     24.069

Total of 2 streams to confluence:
Flow rates before confluence point:
      20.769       3.720
Area of streams before confluence:
        9.350        1.420
Results of confluence:
Total flow rate =     24.069(CFS)
Time of concentration =    12.294 min.
Effective stream area after confluence =     10.770(Ac.)


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Process from Point/Station        1.280 to Point/Station        1.170
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1501.500(Ft.)
Downstream point/station elevation =  1498.300(Ft.)
Pipe length  =   350.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    24.069(CFS)
Given pipe size =     30.00(In.)
Calculated individual pipe flow  =    24.069(CFS)
Normal flow depth in pipe =   16.99(In.)
Flow top width inside pipe =   29.73(In.)
Critical Depth =   20.04(In.)
Pipe flow velocity =      8.40(Ft/s)
Travel time through pipe =    0.69 min.
Time of concentration (TC) =    12.99 min.


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Process from Point/Station        1.280 to Point/Station        1.170
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     10.770(Ac.)
Runoff from this stream =     24.069(CFS)
Time of concentration =   12.99 min.
Rainfall intensity =     2.579(In/Hr)
Summary of stream data:

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


1       26.008     15.06                 2.395
2       24.069     12.99                 2.579
Largest stream flow has longer time of concentration
Qp =     26.008 + sum of
          Qb         Ia/Ib
          24.069 *    0.929 =     22.355
Qp =     48.363

Total of 2 main streams to confluence:
Flow rates before confluence point:
      26.008      24.069
Area of streams before confluence:
       15.030       10.770


Results of confluence:
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```
Total flow rate =     48.363(CFS)
Time of concentration =    15.058 min.
Effective stream area after confluence  =     25.800(Ac.)


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Process from Point/Station        1.170 to Point/Station        1.320
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1498.300(Ft.)
Downstream point/station elevation =  1495.500(Ft.)
Pipe length  =   274.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    48.363(CFS)
Given pipe size =     36.00(In.)
Calculated individual pipe flow  =    48.363(CFS)
Normal flow depth in pipe =   22.55(In.)
Flow top width inside pipe =   34.83(In.)
Critical Depth =   27.17(In.)
Pipe flow velocity =     10.37(Ft/s)
Travel time through pipe =    0.44 min.
Time of concentration (TC) =    15.50 min.


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Process from Point/Station        1.170 to Point/Station        1.320
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     25.800(Ac.)
Runoff from this stream =     48.363(CFS)
Time of concentration =   15.50 min.
Rainfall intensity =     2.361(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        1.290 to Point/Station        1.330
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   138.000(Ft.)
Top (of initial area) elevation =  1513.900(Ft.)
Bottom (of initial area) elevation =  1510.100(Ft.)
Difference in elevation =     3.800(Ft.)
Slope =    0.02754  s(percent)=       2.75
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.447 min.
Rainfall intensity =      3.983(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.868
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  74.80
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.553(CFS)
Total initial stream area =        0.160(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        1.330 to Point/Station        1.340
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**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
----------------------------------------------------------------------------
Top of street segment elevation =  1510.100(Ft.)
End of street segment elevation =  1505.700(Ft.)
Length of street segment  =   879.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      4.873(CFS)
Depth of flow =   0.429(Ft.), Average velocity =   2.022(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  15.110(Ft.)
Flow velocity =   2.02(Ft/s)
Travel time =    7.24 min.     TC =   12.69  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.855
Decimal fraction soil group A = 0.050
Decimal fraction soil group B = 0.850
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.100
RI index for soil(AMC 3)  =  75.36
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      2.609(In/Hr) for a   100.0 year storm
Subarea runoff =      8.543(CFS) for      3.830(Ac.)
Total runoff =      9.096(CFS)  Total area =       3.990(Ac.)
Street flow at end of street =      9.096(CFS)
Half street flow at end of street =      9.096(CFS)
Depth of flow =   0.517(Ft.), Average velocity =   2.307(Ft/s)
Warning: depth of flow exceeds top of curb
Distance that curb overflow reaches into property =    0.85(Ft.)
Flow width (from curb towards crown)=  19.516(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.340 to Point/Station        1.350
**** PIPEFLOW TRAVEL TIME (User specified size) ****
----------------------------------------------------------------------------
Upstream point/station elevation =  1500.300(Ft.)
Downstream point/station elevation =  1499.500(Ft.)
Pipe length  =    79.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     9.096(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     9.096(CFS)
Normal flow depth in pipe =   12.87(In.)
Flow top width inside pipe =   16.25(In.)
Critical Depth =   13.99(In.)
Pipe flow velocity =      6.73(Ft/s)
Travel time through pipe =    0.20 min.
Time of concentration (TC) =    12.89 min.


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

```
Process from Point/Station        1.340 to Point/Station        1.350
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      3.990(Ac.)
Runoff from this stream =      9.096(CFS)
Time of concentration =   12.89 min.
Rainfall intensity =     2.589(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.360 to Point/Station        1.370
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
Initial area flow distance =   133.000(Ft.)
Top (of initial area) elevation =  1512.500(Ft.)
Bottom (of initial area) elevation =  1510.000(Ft.)
Difference in elevation =     2.500(Ft.)
Slope =    0.01880  s(percent)=       1.88
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.793 min.
Rainfall intensity =      3.862(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.867
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  74.80
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.536(CFS)
Total initial stream area =        0.160(Ac.)
Pervious area fraction = 0.350


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.370 to Point/Station        1.350
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
____________________________________________________________________________
Top of street segment elevation =  1510.000(Ft.)
End of street segment elevation =  1505.000(Ft.)
Length of street segment  =   984.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      3.484(CFS)
Depth of flow =   0.390(Ft.), Average velocity =   1.877(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  13.152(Ft.)
Flow velocity =   1.88(Ft/s)
Travel time =    8.74 min.     TC =   14.53  min.
 Adding area flow to street
CONDOMINIUM subarea type
```

```
Runoff Coefficient = 0.862
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.650
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.350
RI index for soil(AMC 3)  =  80.12
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      2.438(In/Hr) for a   100.0 year storm
Subarea runoff =      5.825(CFS) for      2.770(Ac.)
Total runoff =      6.360(CFS)  Total area =       2.930(Ac.)
Street flow at end of street =      6.360(CFS)
Half street flow at end of street =      6.360(CFS)
Depth of flow =   0.462(Ft.), Average velocity =   2.169(Ft/s)
Flow width (from curb towards crown)=  16.749(Ft.)


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Process from Point/Station        1.370 to Point/Station        1.350
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      2.930(Ac.)
Runoff from this stream =      6.360(CFS)
Time of concentration =   14.53 min.
Rainfall intensity =     2.438(In/Hr)
Summary of stream data:

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


1        9.096     12.89                 2.589
2        6.360     14.53                 2.438
Largest stream flow has longer or shorter time of concentration
Qp =      9.096 + sum of
          Qa          Tb/Ta
           6.360 *    0.887 =      5.640
Qp =     14.737

Total of 2 streams to confluence:
Flow rates before confluence point:
       9.096       6.360
Area of streams before confluence:
        3.990        2.930
Results of confluence:
Total flow rate =     14.737(CFS)
Time of concentration =    12.887 min.
Effective stream area after confluence =      6.920(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.350 to Point/Station        1.320
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1499.500(Ft.)
Downstream point/station elevation =  1495.500(Ft.)
Pipe length  =    24.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    14.737(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =    14.737(CFS)
Normal flow depth in pipe =    7.28(In.)
Flow top width inside pipe =   17.67(In.)
Critical Depth =   16.80(In.)
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Pipe flow velocity =     22.01(Ft/s)
Travel time through pipe =    0.02 min.
Time of concentration (TC) =    12.91 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.350 to Point/Station        1.320
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      6.920(Ac.)
Runoff from this stream =     14.737(CFS)
Time of concentration =   12.91 min.
Rainfall intensity =     2.587(In/Hr)
Program is now starting with Main Stream No. 3


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Process from Point/Station        1.380 to Point/Station        1.390
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   912.000(Ft.)
Top (of initial area) elevation =  1509.300(Ft.)
Bottom (of initial area) elevation =  1502.500(Ft.)
Difference in elevation =     6.800(Ft.)
Slope =    0.00746  s(percent)=       0.75
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.056 min.
Rainfall intensity =      2.396(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.815
Decimal fraction soil group A = 0.700
Decimal fraction soil group B = 0.250
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.050
RI index for soil(AMC 3)  =  60.15
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      9.236(CFS)
Total initial stream area =        4.730(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        1.390 to Point/Station        1.320
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1498.500(Ft.)
Downstream point/station elevation =  1495.500(Ft.)
Pipe length  =    32.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     9.236(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     9.236(CFS)
Normal flow depth in pipe =    6.60(In.)
Flow top width inside pipe =   17.35(In.)
Critical Depth =   14.10(In.)
Pipe flow velocity =     15.72(Ft/s)
Travel time through pipe =    0.03 min.
Time of concentration (TC) =    15.09 min.


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Process from Point/Station        1.390 to Point/Station        1.320
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**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      4.730(Ac.)
Runoff from this stream =      9.236(CFS)
Time of concentration =   15.09 min.
Rainfall intensity =     2.393(In/Hr)
Program is now starting with Main Stream No. 4


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.400 to Point/Station        1.410
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Initial area flow distance =   800.000(Ft.)
Top (of initial area) elevation =  1510.500(Ft.)
Bottom (of initial area) elevation =  1504.000(Ft.)
Difference in elevation =     6.500(Ft.)
Slope =    0.00813  s(percent)=       0.81
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.387 min.
Rainfall intensity =      2.755(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.892
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.500
RI index for soil(AMC 3)  =  82.30
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      2.210(CFS)
Total initial stream area =        0.900(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.410 to Point/Station        1.320
**** PIPEFLOW TRAVEL TIME (User specified size) ****
_____________________________________________________________________
Upstream point/station elevation =  1500.000(Ft.)
Downstream point/station elevation =  1495.500(Ft.)
Pipe length  =    57.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.210(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     2.210(CFS)
Normal flow depth in pipe =    3.33(In.)
Flow top width inside pipe =   13.99(In.)
Critical Depth =    6.74(In.)
Pipe flow velocity =      9.81(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =    11.48 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.410 to Point/Station        1.320
**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 4
Stream flow area =      0.900(Ac.)
Runoff from this stream =      2.210(CFS)
Time of concentration =   11.48 min.
```

```
Rainfall intensity =     2.743(In/Hr)
Summary of stream data:

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


1       48.363     15.50                2.361
2       14.737     12.91                2.587
3        9.236     15.09                2.393
4        2.210     11.48                2.743
Largest stream flow has longer time of concentration
Qp =     48.363 + sum of
          Qb         Ia/Ib
          14.737 *    0.913 =     13.448
          Qb         Ia/Ib
           9.236 *    0.987 =      9.114
          Qb         Ia/Ib
           2.210 *    0.861 =      1.903
Qp =     72.827

Total of 4 main streams to confluence:
Flow rates before confluence point:
      48.363      14.737       9.236       2.210
Area of streams before confluence:
       25.800        6.920        4.730        0.900


Results of confluence:
Total flow rate =     72.827(CFS)
Time of concentration =    15.498 min.
Effective stream area after confluence  =     38.350(Ac.)


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Process from Point/Station        1.320 to Point/Station        1.320
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
UNDEVELOPED (good cover) subarea
Runoff Coefficient = 0.849
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.050
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.950
RI index for soil(AMC 3)  =  90.43
Pervious area fraction =  1.000; Impervious fraction =  0.000
Time of concentration =    15.50 min.
Rainfall intensity =      2.361(In/Hr) for a   100.0 year storm
Subarea runoff =      1.885(CFS) for      0.940(Ac.)
Total runoff =     74.712(CFS)  Total area =      39.290(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.320 to Point/Station        1.420
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1491.000(Ft.)
Downstream point/station elevation =  1490.400(Ft.)
Pipe length  =   109.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    74.712(CFS)
Given pipe size =     48.00(In.)
Calculated individual pipe flow  =    74.712(CFS)
Normal flow depth in pipe =   29.63(In.)
```

Flow top width inside pipe =   46.66(In.)
Critical Depth =   31.39(In.)
Pipe flow velocity =   9.18(Ft/s)
Travel time through pipe =   0.20 min.
Time of concentration (TC) =   15.70 min.
End of computations, total study area =   39.29 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.414
Area averaged RI index number = 41.0

B.5 – RATIONAL METHOD ANALYSIS, 100-YEAR COMBINED AREA “B” & "C"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 07/14/25 File:dbc100.out

TRACT 31513
DEVELOPED RATIONAL MEDTHOD ANALYSIS
COMBINED AREAS "B" & "C"
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++
Process from Point/Station 2.000 to Point/Station 2.010
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 818.000(Ft.)
Top (of initial area) elevation = 2010.000(Ft.)
Bottom (of initial area) elevation = 1584.600(Ft.)
Difference in elevation = 425.400(Ft.)
Slope = 0.52005 s(percent)= 52.00
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.834 min.
Rainfall intensity = 3.127(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.879
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.900
RI index for soil(AMC 3) = 94.72
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 5.856(CFS)
Total initial stream area = 2.130(Ac.)
Pervious area fraction = 1.000

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.010 to Point/Station        2.020
**** PIPEFLOW TRAVEL TIME (User specified size) ****
____________________________________________________________________________
Upstream point/station elevation =  1581.100(Ft.)
Downstream point/station elevation =  1559.000(Ft.)
Pipe length  =   117.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     5.856(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     5.856(CFS)
Normal flow depth in pipe =    4.35(In.)
Flow top width inside pipe =   15.42(In.)
Critical Depth =   11.21(In.)
Pipe flow velocity =     17.76(Ft/s)
Travel time through pipe =    0.11 min.
Time of concentration (TC) =     8.94 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.010 to Point/Station        2.020
**** CONFLUENCE OF MAIN STREAMS ****
____________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      2.130(Ac.)
Runoff from this stream =      5.856(CFS)
Time of concentration =    8.94 min.
Rainfall intensity =     3.108(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station        3.020
**** USER DEFINED FLOW INFORMATION AT A POINT ****
____________________________________________________________________________
Rainfall intensity =      2.647(In/Hr) for a   100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.868
Decimal fraction soil group A = 0.250
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.750
RI index for soil(AMC 3)  =  93.22
Pervious area fraction =  1.000; Impervious fraction =  0.000
User specified values are as follows:
TC =  12.33 min.  Rain intensity =       2.65(In/Hr)
Total area =        52.80(Ac.)  Total runoff =    122.89(CFS)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.020 to Point/Station        2.020
**** PIPEFLOW TRAVEL TIME (User specified size) ****
____________________________________________________________________________
Upstream point/station elevation =  1573.500(Ft.)
Downstream point/station elevation =  1559.000(Ft.)
Pipe length  =   204.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   122.890(CFS)
Given pipe size =     36.00(In.)
Calculated individual pipe flow  =   122.890(CFS)
Normal flow depth in pipe =   22.01(In.)
Flow top width inside pipe =   35.10(In.)
Critical depth could not be calculated.
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```
Pipe flow velocity =     27.15(Ft/s)
Travel time through pipe =    0.13 min.
Time of concentration (TC) =    12.46 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.020 to Point/Station        2.020
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     52.800(Ac.)
Runoff from this stream =    122.890(CFS)
Time of concentration =   12.46 min.
Rainfall intensity =     2.633(In/Hr)
Summary of stream data:

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


1        5.856      8.94                 3.108
2      122.890     12.46                 2.633
Largest stream flow has longer time of concentration
Qp =    122.890 + sum of
          Qb         Ia/Ib
           5.856 *    0.847 =      4.962
Qp =    127.852

Total of 2 main streams to confluence:
Flow rates before confluence point:
       5.856     122.890
Area of streams before confluence:
        2.130       52.800


Results of confluence:
Total flow rate =    127.852(CFS)
Time of concentration =    12.459 min.
Effective stream area after confluence  =     54.930(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.020 to Point/Station        2.030
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1559.000(Ft.)
Downstream point/station elevation =  1553.000(Ft.)
Pipe length  =   151.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   127.852(CFS)
Given pipe size =     42.00(In.)
Calculated individual pipe flow  =   127.852(CFS)
Normal flow depth in pipe =   24.38(In.)
Flow top width inside pipe =   41.45(In.)
Critical Depth =   39.57(In.)
Pipe flow velocity =     22.10(Ft/s)
Travel time through pipe =    0.11 min.
Time of concentration (TC) =    12.57 min.


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Process from Point/Station        2.020 to Point/Station        2.030
**** CONFLUENCE OF MAIN STREAMS ****
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```
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     54.930(Ac.)
Runoff from this stream =    127.852(CFS)
Time of concentration =   12.57 min.
Rainfall intensity =     2.621(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.040 to Point/Station        2.050
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   920.000(Ft.)
Top (of initial area) elevation =  2018.000(Ft.)
Bottom (of initial area) elevation =  1580.000(Ft.)
Difference in elevation =   438.000(Ft.)
Slope =    0.47609  s(percent)=      47.61
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.424 min.
Rainfall intensity =      3.028(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.874
Decimal fraction soil group A = 0.200
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.800
RI index for soil(AMC 3)  =  93.76
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     12.469(CFS)
Total initial stream area =        4.710(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station        2.050 to Point/Station        2.030
**** PIPEFLOW TRAVEL TIME (User specified size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1570.000(Ft.)
Downstream point/station elevation =  1553.000(Ft.)
Pipe length  =   222.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    12.469(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =    12.469(CFS)
Normal flow depth in pipe =    8.24(In.)
Flow top width inside pipe =   17.94(In.)
Critical Depth =   15.99(In.)
Pipe flow velocity =     15.82(Ft/s)
Travel time through pipe =    0.23 min.
Time of concentration (TC) =     9.66 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.050 to Point/Station        2.030
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      4.710(Ac.)
Runoff from this stream =     12.469(CFS)
Time of concentration =    9.66 min.
Rainfall intensity =     2.991(In/Hr)
```

```
Summary of stream data:

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


1      127.852     12.57                2.621
2       12.469      9.66                2.991
Largest stream flow has longer time of concentration
Qp =    127.852 + sum of
          Qb         Ia/Ib
          12.469 *    0.876 =     10.929
Qp =    138.780

Total of 2 main streams to confluence:
Flow rates before confluence point:
     127.852      12.469
Area of streams before confluence:
       54.930        4.710


Results of confluence:
Total flow rate =    138.780(CFS)
Time of concentration =    12.573 min.
Effective stream area after confluence  =     59.640(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.030 to Point/Station        2.060
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1553.000(Ft.)
Downstream point/station elevation =  1551.000(Ft.)
Pipe length  =   270.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   138.780(CFS)
Given pipe size =     42.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     7.982(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      5.136(Ft.)
 Minor friction loss =      4.846(Ft.)  K-factor =   1.50
Pipe flow velocity =     14.42(Ft/s)
Travel time through pipe =    0.31 min.
Time of concentration (TC) =    12.89 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.030 to Point/Station        2.060
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     59.640(Ac.)
Runoff from this stream =    138.780(CFS)
Time of concentration =   12.89 min.
Rainfall intensity =     2.589(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.070 to Point/Station        2.080
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
```

```
Initial area flow distance =   172.000(Ft.)
Top (of initial area) elevation =  1594.400(Ft.)
Bottom (of initial area) elevation =  1569.700(Ft.)
Difference in elevation =    24.700(Ft.)
Slope =    0.14360  s(percent)=      14.36
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Warning: TC computed to be less than 5 min.; program is assuming the
time of concentration is 5 minutes.
Initial area time of concentration =    5.000 min.
Rainfall intensity =      4.157(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.866
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.500
RI index for soil(AMC 3)  =  72.80
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.900(CFS)
Total initial stream area =        0.250(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        2.080 to Point/Station        2.090
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1569.700(Ft.)
End of street segment elevation =  1557.600(Ft.)
Length of street segment  =   406.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      3.676(CFS)
Depth of flow =   0.311(Ft.), Average velocity =   3.748(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.242(Ft.)
Flow velocity =   3.75(Ft/s)
Travel time =    1.81 min.     TC =    6.81  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.855
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.400
RI index for soil(AMC 3)  =  69.20
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      3.563(In/Hr) for a   100.0 year storm
Subarea runoff =      5.484(CFS) for      1.800(Ac.)
Total runoff =      6.384(CFS)  Total area =       2.050(Ac.)
Street flow at end of street =      6.384(CFS)
Half street flow at end of street =      6.384(CFS)
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Depth of flow =   0.361(Ft.), Average velocity =   4.255(Ft/s)
Flow width (from curb towards crown)=  11.720(Ft.)


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Process from Point/Station        2.090 to Point/Station        2.060
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1553.600(Ft.)
Downstream point/station elevation =  1551.000(Ft.)
Pipe length  =     9.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     6.384(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     6.384(CFS)
Normal flow depth in pipe =    4.09(In.)
Flow top width inside pipe =   15.08(In.)
Critical Depth =   11.71(In.)
Pipe flow velocity =     21.17(Ft/s)
Travel time through pipe =    0.01 min.
Time of concentration (TC) =     6.81 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.090 to Point/Station        2.060
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.050(Ac.)
Runoff from this stream =      6.384(CFS)
Time of concentration =    6.81 min.
Rainfall intensity =     3.561(In/Hr)
Program is now starting with Main Stream No. 3


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Process from Point/Station        2.100 to Point/Station        2.110
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   169.000(Ft.)
Top (of initial area) elevation =  1583.000(Ft.)
Bottom (of initial area) elevation =  1564.700(Ft.)
Difference in elevation =    18.300(Ft.)
Slope =    0.10828  s(percent)=      10.83
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Warning: TC computed to be less than 5 min.; program is assuming the
time of concentration is 5 minutes.
Initial area time of concentration =    5.000 min.
Rainfall intensity =      4.157(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.797
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      1.359(CFS)
Total initial stream area =        0.410(Ac.)
Pervious area fraction = 0.500


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Process from Point/Station        2.110 to Point/Station        2.120
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
----------------------------------------------------------------------
Top of street segment elevation =  1564.700(Ft.)
End of street segment elevation =  1557.600(Ft.)
Length of street segment  =   287.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      3.168(CFS)
Depth of flow =   0.307(Ft.), Average velocity =   3.372(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.016(Ft.)
Flow velocity =   3.37(Ft/s)
Travel time =    1.42 min.     TC =    6.42  min.
 Adding area flow to street
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.787
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Rainfall intensity =      3.669(In/Hr) for a   100.0 year storm
Subarea runoff =      3.551(CFS) for      1.230(Ac.)
Total runoff =      4.910(CFS)  Total area =       1.640(Ac.)
Street flow at end of street =      4.910(CFS)
Half street flow at end of street =      4.910(CFS)
Depth of flow =   0.345(Ft.), Average velocity =   3.726(Ft/s)
Flow width (from curb towards crown)=  10.913(Ft.)


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Process from Point/Station        2.120 to Point/Station        2.060
**** PIPEFLOW TRAVEL TIME (User specified size) ****
----------------------------------------------------------------------
Upstream point/station elevation =  1553.600(Ft.)
Downstream point/station elevation =  1551.000(Ft.)
Pipe length  =    34.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.910(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     4.910(CFS)
Normal flow depth in pipe =    5.01(In.)
Flow top width inside pipe =   16.13(In.)
Critical Depth =   10.22(In.)
Pipe flow velocity =     12.23(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =     6.46 min.


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Process from Point/Station        2.120 to Point/Station        2.060
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**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      1.640(Ac.)
Runoff from this stream =      4.910(CFS)
Time of concentration =    6.46 min.
Rainfall intensity =     3.656(In/Hr)
Summary of stream data:

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


1      138.780     12.89                 2.589
2        6.384      6.81                 3.561
3        4.910      6.46                 3.656
Largest stream flow has longer time of concentration
Qp =    138.780 + sum of
          Qb         Ia/Ib
           6.384 *    0.727 =      4.642
          Qb         Ia/Ib
           4.910 *    0.708 =      3.478
Qp =    146.900

Total of 3 main streams to confluence:
Flow rates before confluence point:
     138.780       6.384       4.910
Area of streams before confluence:
       59.640        2.050        1.640


Results of confluence:
Total flow rate =    146.900(CFS)
Time of concentration =    12.885 min.
Effective stream area after confluence  =     63.330(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.060 to Point/Station        2.130
**** PIPEFLOW TRAVEL TIME (User specified size) ****
_____________________________________________________________________
Upstream point/station elevation =  1551.000(Ft.)
Downstream point/station elevation =  1549.500(Ft.)
Pipe length  =    27.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   146.900(CFS)
Given pipe size =     42.00(In.)
Calculated individual pipe flow  =   146.900(CFS)
Normal flow depth in pipe =   23.93(In.)
Flow top width inside pipe =   41.59(In.)
Critical depth could not be calculated.
Pipe flow velocity =     25.96(Ft/s)
Travel time through pipe =    0.02 min.
Time of concentration (TC) =    12.90 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.060 to Point/Station        2.130
**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     63.330(Ac.)
```

```
Runoff from this stream =    146.900(CFS)
Time of concentration =   12.90 min.
Rainfall intensity =     2.588(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        2.140 to Point/Station        2.150
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   740.000(Ft.)
Top (of initial area) elevation =  1922.000(Ft.)
Bottom (of initial area) elevation =  1574.000(Ft.)
Difference in elevation =   348.000(Ft.)
Slope =    0.47027  s(percent)=      47.03
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.660 min.
Rainfall intensity =      3.159(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.878
Decimal fraction soil group A = 0.150
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.850
RI index for soil(AMC 3)  =  94.28
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      8.288(CFS)
Total initial stream area =       2.990(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station        2.150 to Point/Station        2.130
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1570.000(Ft.)
Downstream point/station elevation =  1549.500(Ft.)
Pipe length  =   354.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     8.288(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     8.288(CFS)
Normal flow depth in pipe =    7.09(In.)
Flow top width inside pipe =   17.59(In.)
Critical Depth =   13.37(In.)
Pipe flow velocity =     12.81(Ft/s)
Travel time through pipe =    0.46 min.
Time of concentration (TC) =     9.12 min.


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Process from Point/Station        2.150 to Point/Station        2.130
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.990(Ac.)
Runoff from this stream =      8.288(CFS)
Time of concentration =    9.12 min.
Rainfall intensity =     3.078(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                (In/Hr)
```

```
1      146.900     12.90                 2.588
2        8.288      9.12                 3.078
Largest stream flow has longer time of concentration
Qp =    146.900 + sum of
          Qb         Ia/Ib
           8.288 *    0.841 =      6.968
Qp =    153.868

Total of 2 main streams to confluence:
Flow rates before confluence point:
     146.900       8.288
Area of streams before confluence:
       63.330        2.990


Results of confluence:
Total flow rate =    153.868(CFS)
Time of concentration =    12.902 min.
Effective stream area after confluence  =     66.320(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.130 to Point/Station        2.160
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1549.500(Ft.)
Downstream point/station elevation =  1540.500(Ft.)
Pipe length  =   270.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   153.868(CFS)
Given pipe size =     42.00(In.)
Calculated individual pipe flow  =   153.868(CFS)
Normal flow depth in pipe =   29.39(In.)
Flow top width inside pipe =   38.50(In.)
Critical depth could not be calculated.
Pipe flow velocity =     21.38(Ft/s)
Travel time through pipe =    0.21 min.
Time of concentration (TC) =    13.11 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.130 to Point/Station        2.160
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     66.320(Ac.)
Runoff from this stream =    153.868(CFS)
Time of concentration =   13.11 min.
Rainfall intensity =     2.567(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.170 to Point/Station        2.180
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   599.000(Ft.)
Top (of initial area) elevation =  1948.000(Ft.)
Bottom (of initial area) elevation =  1592.000(Ft.)
Difference in elevation =   356.000(Ft.)
Slope =    0.59432  s(percent)=      59.43
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```
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.593 min.
Rainfall intensity =      3.373(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.884
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3)  =  95.60
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      1.550(CFS)
Total initial stream area =        0.520(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.180 to Point/Station        2.190
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1592.000(Ft.)
Downstream point elevation =  1556.000(Ft.)
Channel length thru subarea  =   578.000(Ft.)
Channel base width      =    0.000(Ft.)
Slope or 'Z' of left channel bank =   1.500
Slope or 'Z' of right channel bank =   1.500
Estimated mean flow rate at midpoint of channel =     11.535(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    1.500(Ft.)
Flow(q) thru subarea =     11.535(CFS)
Depth of flow =   0.804(Ft.), Average velocity =  11.909(Ft/s)
Channel flow top width =    2.411(Ft.)
Flow Velocity =   11.91(Ft/s)
Travel time  =    0.81 min.
Time of concentration =    8.40 min.

Sub-Channel No. 1 Critical depth =      1.297(Ft.)
  '     '       '     Critical flow top width =      3.891(Ft.)
  '     '       '     Critical flow velocity=    4.572(Ft/s)
  '     '       '     Critical flow area =      2.523(Sq.Ft)

 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.883
Decimal fraction soil group A = 0.010
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.990
RI index for soil(AMC 3)  =  95.51
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      3.207(In/Hr) for a   100.0 year storm
Subarea runoff =     19.900(CFS) for      7.030(Ac.)
Total runoff =     21.450(CFS)  Total area =       7.550(Ac.)
Depth of flow =   1.014(Ft.), Average velocity =  13.907(Ft/s)

Sub-Channel No. 1 Critical depth =      1.641(Ft.)
  '     '       '     Critical flow top width =      4.500(Ft.)
  '     '       '     Critical flow velocity=    5.352(Ft/s)
  '     '       '     Critical flow area =      4.008(Sq.Ft)



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Process from Point/Station        2.190 to Point/Station        2.160
**** PIPEFLOW TRAVEL TIME (User specified size) ****
_____________________________________________________________________
Upstream point/station elevation =  1552.000(Ft.)
Downstream point/station elevation =  1540.500(Ft.)
Pipe length  =   136.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    21.450(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =    21.450(CFS)
Normal flow depth in pipe =   11.12(In.)
Flow top width inside pipe =   17.49(In.)
Critical depth could not be calculated.
Pipe flow velocity =     18.72(Ft/s)
Travel time through pipe =    0.12 min.
Time of concentration (TC) =     8.52 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.190 to Point/Station        2.160
**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      7.550(Ac.)
Runoff from this stream =     21.450(CFS)
Time of concentration =    8.52 min.
Rainfall intensity =     3.184(In/Hr)
Summary of stream data:

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


1      153.868     13.11                2.567
2       21.450      8.52                3.184
Largest stream flow has longer time of concentration
Qp =    153.868 + sum of
          Qb         Ia/Ib
          21.450 *    0.806 =     17.294
Qp =    171.162

Total of 2 main streams to confluence:
Flow rates before confluence point:
     153.868      21.450
Area of streams before confluence:
       66.320        7.550


Results of confluence:
Total flow rate =    171.162(CFS)
Time of concentration =    13.113 min.
Effective stream area after confluence  =     73.870(Ac.)


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Process from Point/Station        2.160 to Point/Station        2.200
**** PIPEFLOW TRAVEL TIME (User specified size) ****
_____________________________________________________________________
Upstream point/station elevation =  1540.500(Ft.)
Downstream point/station elevation =  1522.000(Ft.)
Pipe length  =   329.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   171.162(CFS)
Given pipe size =     42.00(In.)
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Calculated individual pipe flow  =   171.162(CFS)
Normal flow depth in pipe =   26.32(In.)
Flow top width inside pipe =   40.63(In.)
Critical depth could not be calculated.
Pipe flow velocity =     26.97(Ft/s)
Travel time through pipe =    0.20 min.
Time of concentration (TC) =    13.32 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.160 to Point/Station        2.200
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     73.870(Ac.)
Runoff from this stream =    171.162(CFS)
Time of concentration =   13.32 min.
Rainfall intensity =     2.547(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        2.210 to Point/Station        2.220
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   265.000(Ft.)
Top (of initial area) elevation =  1572.000(Ft.)
Bottom (of initial area) elevation =  1554.500(Ft.)
Difference in elevation =    17.500(Ft.)
Slope =    0.06604  s(percent)=       6.60
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.258 min.
Rainfall intensity =      3.716(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.788
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      0.791(CFS)
Total initial stream area =        0.270(Ac.)
Pervious area fraction = 0.500


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Process from Point/Station        2.220 to Point/Station        2.230
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of street segment elevation =  1554.500(Ft.)
End of street segment elevation =  1530.700(Ft.)
Length of street segment  =   501.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
```

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Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      2.897(CFS)
Depth of flow =   0.275(Ft.), Average velocity =   4.271(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   7.427(Ft.)
Flow velocity =   4.27(Ft/s)
Travel time =    1.96 min.     TC =    8.21  min.
 Adding area flow to street
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.830
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.400
RI index for soil(AMC 3)  =  69.20
Pervious area fraction =  0.500; Impervious fraction =  0.500
Rainfall intensity =      3.244(In/Hr) for a   100.0 year storm
Subarea runoff =      4.121(CFS) for      1.530(Ac.)
Total runoff =      4.912(CFS)  Total area =       1.800(Ac.)
Street flow at end of street =      4.912(CFS)
Half street flow at end of street =      4.912(CFS)
Depth of flow =   0.316(Ft.), Average velocity =   4.792(Ft/s)
Flow width (from curb towards crown)=   9.478(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.230 to Point/Station        2.200
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1526.700(Ft.)
Downstream point/station elevation =  1522.000(Ft.)
Pipe length  =    26.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.912(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     4.912(CFS)
Normal flow depth in pipe =    4.03(In.)
Flow top width inside pipe =   15.01(In.)
Critical Depth =   10.22(In.)
Pipe flow velocity =     16.62(Ft/s)
Travel time through pipe =    0.03 min.
Time of concentration (TC) =     8.24 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.230 to Point/Station        2.200
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.800(Ac.)
Runoff from this stream =      4.912(CFS)
Time of concentration =    8.24 min.
Rainfall intensity =     3.238(In/Hr)
Program is now starting with Main Stream No. 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.240 to Point/Station        2.250
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
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```
Initial area flow distance =   538.000(Ft.)
Top (of initial area) elevation =  1556.000(Ft.)
Bottom (of initial area) elevation =  1530.700(Ft.)
Difference in elevation =    25.300(Ft.)
Slope =    0.04703  s(percent)=       4.70
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.434 min.
Rainfall intensity =      3.201(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.813
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      3.459(CFS)
Total initial stream area =        1.330(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        2.250 to Point/Station        2.200
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1526.700(Ft.)
Downstream point/station elevation =  1522.000(Ft.)
Pipe length  =    18.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.459(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     3.459(CFS)
Normal flow depth in pipe =    3.10(In.)
Flow top width inside pipe =   13.59(In.)
Critical Depth =    8.51(In.)
Pipe flow velocity =     17.07(Ft/s)
Travel time through pipe =    0.02 min.
Time of concentration (TC) =     8.45 min.


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Process from Point/Station        2.250 to Point/Station        2.200
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      1.330(Ac.)
Runoff from this stream =      3.459(CFS)
Time of concentration =    8.45 min.
Rainfall intensity =     3.197(In/Hr)
Summary of stream data:

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


1      171.162     13.32                2.547
2        4.912      8.24                3.238
3        3.459      8.45                3.197
Largest stream flow has longer time of concentration
Qp =    171.162 + sum of
          Qb         Ia/Ib
           4.912 *    0.787 =      3.863
          Qb         Ia/Ib
```

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           3.459 *    0.797 =      2.755
Qp =    177.781

Total of 3 main streams to confluence:
Flow rates before confluence point:
     171.162       4.912       3.459
Area of streams before confluence:
       73.870        1.800        1.330


Results of confluence:
Total flow rate =    177.781(CFS)
Time of concentration =    13.316 min.
Effective stream area after confluence  =     77.000(Ac.)


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Process from Point/Station        2.200 to Point/Station        2.260
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1522.000(Ft.)
Downstream point/station elevation =  1517.000(Ft.)
Pipe length  =   232.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   177.781(CFS)
Given pipe size =     42.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
    10.194(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      7.242(Ft.)
 Minor friction loss =      7.953(Ft.)  K-factor =   1.50
Pipe flow velocity =     18.48(Ft/s)
Travel time through pipe =    0.21 min.
Time of concentration (TC) =    13.53 min.


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Process from Point/Station        2.200 to Point/Station        2.260
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     77.000(Ac.)
Runoff from this stream =    177.781(CFS)
Time of concentration =   13.53 min.
Rainfall intensity =     2.527(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        2.270 to Point/Station        2.280
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   296.000(Ft.)
Top (of initial area) elevation =  1561.000(Ft.)
Bottom (of initial area) elevation =  1532.500(Ft.)
Difference in elevation =    28.500(Ft.)
Slope =    0.09628  s(percent)=       9.63
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.243 min.
Rainfall intensity =      3.238(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.880
Decimal fraction soil group A = 0.100
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Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.900
RI index for soil(AMC 3)  =  94.72
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      1.538(CFS)
Total initial stream area =        0.540(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station        2.280 to Point/Station        2.260
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1528.500(Ft.)
Downstream point/station elevation =  1517.000(Ft.)
Pipe length  =    69.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.538(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     1.538(CFS)
Normal flow depth in pipe =    2.33(In.)
Flow top width inside pipe =   12.09(In.)
Critical Depth =    5.58(In.)
Pipe flow velocity =     11.45(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =     8.34 min.


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Process from Point/Station        2.280 to Point/Station        2.260
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      0.540(Ac.)
Runoff from this stream =      1.538(CFS)
Time of concentration =    8.34 min.
Rainfall intensity =     3.218(In/Hr)
Summary of stream data:

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


1      177.781     13.53                2.527
2        1.538      8.34                3.218
Largest stream flow has longer time of concentration
Qp =    177.781 + sum of
          Qb         Ia/Ib
           1.538 *    0.785 =      1.208
Qp =    178.989

Total of 2 main streams to confluence:
Flow rates before confluence point:
     177.781       1.538
Area of streams before confluence:
       77.000        0.540


Results of confluence:
Total flow rate =    178.989(CFS)
Time of concentration =    13.526 min.
Effective stream area after confluence  =     77.540(Ac.)
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Process from Point/Station        2.260 to Point/Station        2.290
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1517.000(Ft.)
Downstream point/station elevation =  1510.000(Ft.)
Pipe length  =   291.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   178.989(CFS)
Given pipe size =     48.00(In.)
Calculated individual pipe flow  =   178.989(CFS)
Normal flow depth in pipe =   32.58(In.)
Flow top width inside pipe =   44.83(In.)
Critical Depth =   45.24(In.)
Pipe flow velocity =     19.71(Ft/s)
Travel time through pipe =    0.25 min.
Time of concentration (TC) =    13.77 min.


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Process from Point/Station        2.260 to Point/Station        2.290
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     77.540(Ac.)
Runoff from this stream =    178.989(CFS)
Time of concentration =   13.77 min.
Rainfall intensity =     2.505(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        2.300 to Point/Station        2.310
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   309.000(Ft.)
Top (of initial area) elevation =  1542.000(Ft.)
Bottom (of initial area) elevation =  1520.800(Ft.)
Difference in elevation =    21.200(Ft.)
Slope =    0.06861  s(percent)=       6.86
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.080 min.
Rainfall intensity =      4.124(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.888
Decimal fraction soil group A = 0.650
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.350
RI index for soil(AMC 3)  =  67.05
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      0.622(CFS)
Total initial stream area =        0.170(Ac.)
Pervious area fraction = 0.100


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Process from Point/Station        2.310 to Point/Station        2.320
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of street segment elevation =  1520.800(Ft.)
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End of street segment elevation =  1518.300(Ft.)
Length of street segment  =   331.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      2.381(CFS)
Depth of flow =   0.333(Ft.), Average velocity =   1.998(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  10.321(Ft.)
Flow velocity =   2.00(Ft/s)
Travel time =    2.76 min.     TC =    7.84  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.844
Decimal fraction soil group A = 0.700
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.300
RI index for soil(AMC 3)  =  64.90
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      3.319(In/Hr) for a   100.0 year storm
Subarea runoff =      3.445(CFS) for      1.230(Ac.)
Total runoff =      4.068(CFS)  Total area =       1.400(Ac.)
Street flow at end of street =      4.068(CFS)
Half street flow at end of street =      4.068(CFS)
Depth of flow =   0.385(Ft.), Average velocity =   2.265(Ft/s)
Flow width (from curb towards crown)=  12.921(Ft.)


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Process from Point/Station        2.320 to Point/Station        2.290
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1512.300(Ft.)
Downstream point/station elevation =  1510.000(Ft.)
Pipe length  =    11.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.068(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     4.068(CFS)
Normal flow depth in pipe =    3.54(In.)
Flow top width inside pipe =   14.31(In.)
Critical Depth =    9.27(In.)
Pipe flow velocity =     16.56(Ft/s)
Travel time through pipe =    0.01 min.
Time of concentration (TC) =     7.85 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.320 to Point/Station        2.290
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
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Stream flow area =      1.400(Ac.)
Runoff from this stream =      4.068(CFS)
Time of concentration =    7.85 min.
Rainfall intensity =     3.317(In/Hr)
Program is now starting with Main Stream No. 3


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Process from Point/Station        2.330 to Point/Station        2.340
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   286.000(Ft.)
Top (of initial area) elevation =  1532.000(Ft.)
Bottom (of initial area) elevation =  1519.700(Ft.)
Difference in elevation =    12.300(Ft.)
Slope =    0.04301  s(percent)=       4.30
TC = k(0.336)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.056 min.
Rainfall intensity =      3.777(In/Hr) for a   100.0 year storm
MOBILE HOME PARK subarea type
Runoff Coefficient = 0.845
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.250; Impervious fraction =  0.750
Initial subarea runoff =      1.627(CFS)
Total initial stream area =        0.510(Ac.)
Pervious area fraction = 0.250


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.340 to Point/Station        2.290
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1515.700(Ft.)
Downstream point/station elevation =  1510.000(Ft.)
Pipe length  =    45.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.627(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     1.627(CFS)
Normal flow depth in pipe =    2.56(In.)
Flow top width inside pipe =   12.57(In.)
Critical Depth =    5.74(In.)
Pipe flow velocity =     10.58(Ft/s)
Travel time through pipe =    0.07 min.
Time of concentration (TC) =     6.13 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.340 to Point/Station        2.290
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      0.510(Ac.)
Runoff from this stream =      1.627(CFS)
Time of concentration =    6.13 min.
Rainfall intensity =     3.755(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
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```
 No.       (CFS)       (min)                (In/Hr)


1      178.989     13.77                2.505
2        4.068      7.85                3.317
3        1.627      6.13                3.755
Largest stream flow has longer time of concentration
Qp =    178.989 + sum of
          Qb         Ia/Ib
           4.068 *    0.755 =      3.071
          Qb         Ia/Ib
           1.627 *    0.667 =      1.085
Qp =    183.146

Total of 3 main streams to confluence:
Flow rates before confluence point:
     178.989       4.068       1.627
Area of streams before confluence:
       77.540        1.400        0.510


Results of confluence:
Total flow rate =    183.146(CFS)
Time of concentration =    13.772 min.
Effective stream area after confluence  =     79.450(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.290 to Point/Station        2.350
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1510.000(Ft.)
Downstream point/station elevation =  1502.800(Ft.)
Pipe length  =   242.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   183.146(CFS)
Given pipe size =     48.00(In.)
Calculated individual pipe flow  =   183.146(CFS)
Normal flow depth in pipe =   30.70(In.)
Flow top width inside pipe =   46.09(In.)
Critical Depth =   45.47(In.)
Pipe flow velocity =     21.58(Ft/s)
Travel time through pipe =    0.19 min.
Time of concentration (TC) =    13.96 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.290 to Point/Station        2.350
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     79.450(Ac.)
Runoff from this stream =    183.146(CFS)
Time of concentration =   13.96 min.
Rainfall intensity =     2.488(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.360 to Point/Station        2.370
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   148.000(Ft.)
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Top (of initial area) elevation =  1530.000(Ft.)
Bottom (of initial area) elevation =  1516.500(Ft.)
Difference in elevation =    13.500(Ft.)
Slope =    0.09122  s(percent)=       9.12
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Warning: TC computed to be less than 5 min.; program is assuming the
time of concentration is 5 minutes.
Initial area time of concentration =    5.000 min.
Rainfall intensity =      4.157(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.887
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3)  =  88.00
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      0.442(CFS)
Total initial stream area =        0.120(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        2.370 to Point/Station        2.380
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1516.500(Ft.)
End of street segment elevation =  1514.400(Ft.)
Length of street segment  =   201.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      1.534(CFS)
Depth of flow =   0.284(Ft.), Average velocity =   2.055(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   7.872(Ft.)
Flow velocity =   2.05(Ft/s)
Travel time =    1.63 min.     TC =    6.63  min.
 Adding area flow to street
CONDOMINIUM subarea type
Runoff Coefficient = 0.862
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.500
RI index for soil(AMC 3)  =  72.80
Pervious area fraction =  0.350; Impervious fraction =  0.650
Rainfall intensity =      3.610(In/Hr) for a   100.0 year storm
Subarea runoff =      2.084(CFS) for      0.670(Ac.)
Total runoff =      2.527(CFS)  Total area =       0.790(Ac.)
Street flow at end of street =      2.527(CFS)
Half street flow at end of street =      2.527(CFS)
Depth of flow =   0.324(Ft.), Average velocity =   2.295(Ft/s)
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Flow width (from curb towards crown)=   9.871(Ft.)


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Process from Point/Station        2.380 to Point/Station        2.350
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1508.400(Ft.)
Downstream point/station elevation =  1502.800(Ft.)
Pipe length  =    11.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.527(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     2.527(CFS)
Normal flow depth in pipe =    2.26(In.)
Flow top width inside pipe =   11.94(In.)
Critical Depth =    7.21(In.)
Pipe flow velocity =     19.65(Ft/s)
Travel time through pipe =    0.01 min.
Time of concentration (TC) =     6.64 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.380 to Point/Station        2.350
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      0.790(Ac.)
Runoff from this stream =      2.527(CFS)
Time of concentration =    6.64 min.
Rainfall intensity =     3.607(In/Hr)
Program is now starting with Main Stream No. 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.390 to Point/Station        2.400
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   206.000(Ft.)
Top (of initial area) elevation =  1517.000(Ft.)
Bottom (of initial area) elevation =  1514.400(Ft.)
Difference in elevation =     2.600(Ft.)
Slope =    0.01262  s(percent)=       1.26
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.060 min.
Rainfall intensity =      3.776(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.881
Decimal fraction soil group A = 0.900
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.100
RI index for soil(AMC 3)  =  56.30
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      0.466(CFS)
Total initial stream area =        0.140(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.400 to Point/Station        2.350
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
```

```
Upstream point/station elevation =  1508.400(Ft.)
Downstream point/station elevation =  1502.800(Ft.)
Pipe length  =    35.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     0.466(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     0.466(CFS)
Normal flow depth in pipe =    1.33(In.)
Flow top width inside pipe =    9.43(In.)
Critical depth could not be calculated.
Pipe flow velocity =      7.88(Ft/s)
Travel time through pipe =    0.07 min.
Time of concentration (TC) =     6.13 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.400 to Point/Station        2.350
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      0.140(Ac.)
Runoff from this stream =      0.466(CFS)
Time of concentration =    6.13 min.
Rainfall intensity =     3.753(In/Hr)
Summary of stream data:

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


1      183.146     13.96                 2.488
2        2.527      6.64                 3.607
3        0.466      6.13                 3.753
Largest stream flow has longer time of concentration
Qp =    183.146 + sum of
          Qb         Ia/Ib
           2.527 *    0.690 =      1.743
          Qb         Ia/Ib
           0.466 *    0.663 =      0.309
Qp =    185.197

Total of 3 main streams to confluence:
Flow rates before confluence point:
     183.146       2.527       0.466
Area of streams before confluence:
       79.450        0.790        0.140


Results of confluence:
Total flow rate =    185.197(CFS)
Time of concentration =    13.959 min.
Effective stream area after confluence  =     80.380(Ac.)


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Process from Point/Station        2.350 to Point/Station        2.410
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1502.800(Ft.)
Downstream point/station elevation =  1500.300(Ft.)
Pipe length  =   247.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   185.197(CFS)
Given pipe size =     48.00(In.)
```

```
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     6.663(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      4.104(Ft.)
 Minor friction loss =      5.059(Ft.)  K-factor =   1.50
Critical depth could not be calculated.
Pipe flow velocity =     14.74(Ft/s)
Travel time through pipe =    0.28 min.
Time of concentration (TC) =    14.24 min.


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Process from Point/Station        2.350 to Point/Station        2.410
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     80.380(Ac.)
Runoff from this stream =    185.197(CFS)
Time of concentration =   14.24 min.
Rainfall intensity =     2.463(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.420 to Point/Station        2.430
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   337.000(Ft.)
Top (of initial area) elevation =  1522.800(Ft.)
Bottom (of initial area) elevation =  1512.000(Ft.)
Difference in elevation =    10.800(Ft.)
Slope =    0.03205  s(percent)=       3.20
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.553 min.
Rainfall intensity =      3.382(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.856
Decimal fraction soil group A = 0.550
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.450
RI index for soil(AMC 3)  =  71.08
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      2.202(CFS)
Total initial stream area =        0.760(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        2.430 to Point/Station        2.410
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1508.000(Ft.)
Downstream point/station elevation =  1500.300(Ft.)
Pipe length  =    11.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.202(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     2.202(CFS)
Normal flow depth in pipe =    1.96(In.)
Flow top width inside pipe =   11.22(In.)
Critical Depth =    6.72(In.)
Pipe flow velocity =     21.07(Ft/s)
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Travel time through pipe =    0.01 min.
Time of concentration (TC) =     7.56 min.


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Process from Point/Station        2.430 to Point/Station        2.410
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      0.760(Ac.)
Runoff from this stream =      2.202(CFS)
Time of concentration =    7.56 min.
Rainfall intensity =     3.380(In/Hr)
Program is now starting with Main Stream No. 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.440 to Point/Station        2.450
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   203.000(Ft.)
Top (of initial area) elevation =  1514.500(Ft.)
Bottom (of initial area) elevation =  1512.000(Ft.)
Difference in elevation =     2.500(Ft.)
Slope =    0.01232  s(percent)=       1.23
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.054 min.
Rainfall intensity =      3.778(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.878
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  52.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      0.431(CFS)
Total initial stream area =        0.130(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.450 to Point/Station        2.410
**** PIPEFLOW TRAVEL TIME (User specified size) ****
______________________________________________________________________________
Upstream point/station elevation =  1508.000(Ft.)
Downstream point/station elevation =  1500.300(Ft.)
Pipe length  =    36.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     0.431(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     0.431(CFS)
Normal flow depth in pipe =    1.20(In.)
Flow top width inside pipe =    8.98(In.)
Critical depth could not be calculated.
Pipe flow velocity =      8.51(Ft/s)
Travel time through pipe =    0.07 min.
Time of concentration (TC) =     6.12 min.


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Process from Point/Station        2.450 to Point/Station        2.410
**** CONFLUENCE OF MAIN STREAMS ****
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_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      0.130(Ac.)
Runoff from this stream =      0.431(CFS)
Time of concentration =    6.12 min.
Rainfall intensity =     3.756(In/Hr)
Summary of stream data:

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


1      185.197     14.24                2.463
2        2.202      7.56                3.380
3        0.431      6.12                3.756
Largest stream flow has longer time of concentration
Qp =    185.197 + sum of
          Qb         Ia/Ib
           2.202 *    0.729 =      1.604
          Qb         Ia/Ib
           0.431 *    0.656 =      0.283
Qp =    187.084

Total of 3 main streams to confluence:
Flow rates before confluence point:
     185.197       2.202       0.431
Area of streams before confluence:
       80.380        0.760        0.130


Results of confluence:
Total flow rate =    187.084(CFS)
Time of concentration =    14.238 min.
Effective stream area after confluence  =     81.270(Ac.)


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Process from Point/Station        2.410 to Point/Station        2.460
**** PIPEFLOW TRAVEL TIME (User specified size) ****
_____________________________________________________________________
Upstream point/station elevation =  1500.300(Ft.)
Downstream point/station elevation =  1497.600(Ft.)
Pipe length  =   205.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   187.084(CFS)
Given pipe size =     48.00(In.)
NOTE: Normal flow is pressure flow in user selected pipe size.
The approximate hydraulic grade line above the pipe invert is
     5.939(Ft.)  at the headworks or inlet of the pipe(s)
 Pipe friction loss =      3.476(Ft.)
 Minor friction loss =      5.162(Ft.)  K-factor =   1.50
Critical depth could not be calculated.
Pipe flow velocity =     14.89(Ft/s)
Travel time through pipe =    0.23 min.
Time of concentration (TC) =    14.47 min.


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Process from Point/Station        2.410 to Point/Station        2.460
**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
```

```
Stream flow area =     81.270(Ac.)
Runoff from this stream =    187.084(CFS)
Time of concentration =   14.47 min.
Rainfall intensity =     2.444(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station        2.470 to Point/Station        2.480
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   529.000(Ft.)
Top (of initial area) elevation =  1510.500(Ft.)
Bottom (of initial area) elevation =  1505.500(Ft.)
Difference in elevation =     5.000(Ft.)
Slope =    0.00945  s(percent)=       0.95
TC = k(0.370)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.547 min.
Rainfall intensity =      2.735(In/Hr) for a   100.0 year storm
CONDOMINIUM subarea type
Runoff Coefficient = 0.856
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =  74.80
Pervious area fraction =  0.350; Impervious fraction =  0.650
Initial subarea runoff =      1.919(CFS)
Total initial stream area =        0.820(Ac.)
Pervious area fraction = 0.350


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Process from Point/Station        2.480 to Point/Station        2.490
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1500.500(Ft.)
Downstream point/station elevation =  1500.000(Ft.)
Pipe length  =    40.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.919(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     1.919(CFS)
Normal flow depth in pipe =    4.92(In.)
Flow top width inside pipe =   16.05(In.)
Critical Depth =    6.26(In.)
Pipe flow velocity =      4.90(Ft/s)
Travel time through pipe =    0.14 min.
Time of concentration (TC) =    11.68 min.


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Process from Point/Station        2.480 to Point/Station        2.490
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      0.820(Ac.)
Runoff from this stream =      1.919(CFS)
Time of concentration =   11.68 min.
Rainfall intensity =     2.719(In/Hr)


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Process from Point/Station        2.500 to Point/Station        2.510
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**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Initial area flow distance =   204.000(Ft.)
Top (of initial area) elevation =  1597.000(Ft.)
Bottom (of initial area) elevation =  1510.000(Ft.)
Difference in elevation =    87.000(Ft.)
Slope =    0.42647  s(percent)=      42.65
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    5.274 min.
Rainfall intensity =      4.047(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.884
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.200
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.800
RI index for soil(AMC 3)  =  94.72
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      0.966(CFS)
Total initial stream area =        0.270(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station        2.510 to Point/Station        2.490
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________
Top of street segment elevation =  1510.000(Ft.)
End of street segment elevation =  1505.500(Ft.)
Length of street segment  =   438.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  20.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.065
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      2.192(CFS)
Depth of flow =   0.313(Ft.), Average velocity =   2.208(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =   9.307(Ft.)
Flow velocity =   2.21(Ft/s)
Travel time =    3.31 min.     TC =    8.58  min.
 Adding area flow to street
MOBILE HOME PARK subarea type
Runoff Coefficient = 0.865
Decimal fraction soil group A = 0.300
Decimal fraction soil group B = 0.680
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.020
RI index for soil(AMC 3)  =  69.18
Pervious area fraction =  0.250; Impervious fraction =  0.750
Rainfall intensity =      3.173(In/Hr) for a   100.0 year storm
Subarea runoff =      2.359(CFS) for      0.860(Ac.)
Total runoff =      3.325(CFS)  Total area =       1.130(Ac.)
Street flow at end of street =      3.325(CFS)
Half street flow at end of street =      3.325(CFS)
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Depth of flow =   0.350(Ft.), Average velocity =   2.429(Ft/s)
Flow width (from curb towards crown)=  11.145(Ft.)


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Process from Point/Station        2.510 to Point/Station        2.490
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      1.130(Ac.)
Runoff from this stream =      3.325(CFS)
Time of concentration =    8.58 min.
Rainfall intensity =     3.173(In/Hr)
Summary of stream data:

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


1        1.919     11.68                 2.719
2        3.325      8.58                 3.173
Largest stream flow has longer or shorter time of concentration
Qp =      3.325 + sum of
          Qa          Tb/Ta
           1.919 *    0.734 =      1.409
Qp =      4.734

Total of 2 streams to confluence:
Flow rates before confluence point:
       1.919       3.325
Area of streams before confluence:
        0.820        1.130
Results of confluence:
Total flow rate =      4.734(CFS)
Time of concentration =     8.580 min.
Effective stream area after confluence =      1.950(Ac.)


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Process from Point/Station        2.490 to Point/Station        2.460
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1500.000(Ft.)
Downstream point/station elevation =  1497.600(Ft.)
Pipe length  =    34.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.734(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     4.734(CFS)
Normal flow depth in pipe =    5.02(In.)
Flow top width inside pipe =   16.14(In.)
Critical Depth =   10.03(In.)
Pipe flow velocity =     11.77(Ft/s)
Travel time through pipe =    0.05 min.
Time of concentration (TC) =     8.63 min.


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Process from Point/Station        2.490 to Point/Station        2.460
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.950(Ac.)
```

```
Runoff from this stream =      4.734(CFS)
Time of concentration =    8.63 min.
Rainfall intensity =     3.164(In/Hr)
Summary of stream data:

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


1      187.084     14.47                 2.444
2        4.734      8.63                 3.164
Largest stream flow has longer time of concentration
Qp =    187.084 + sum of
          Qb         Ia/Ib
           4.734 *    0.772 =      3.656
Qp =    190.740

Total of 2 main streams to confluence:
Flow rates before confluence point:
     187.084       4.734
Area of streams before confluence:
       81.270        1.950


Results of confluence:
Total flow rate =    190.740(CFS)
Time of concentration =    14.467 min.
Effective stream area after confluence  =     83.220(Ac.)


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Process from Point/Station        2.460 to Point/Station        2.460
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
UNDEVELOPED (fair cover) subarea
Runoff Coefficient = 0.843
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.500
RI index for soil(AMC 3)  =  88.90
Pervious area fraction =  1.000; Impervious fraction =  0.000
Time of concentration =    14.47 min.
Rainfall intensity =      2.444(In/Hr) for a   100.0 year storm
Subarea runoff =      3.377(CFS) for      1.640(Ac.)
Total runoff =    194.117(CFS)  Total area =      84.860(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.460 to Point/Station        2.520
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1504.500(Ft.)
Downstream point/station elevation =  1504.000(Ft.)
Pipe length  =    85.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   194.117(CFS)
Given pipe size =     60.00(In.)
Calculated individual pipe flow  =   194.117(CFS)
Normal flow depth in pipe =   47.72(In.)
Flow top width inside pipe =   48.42(In.)
Critical Depth =   47.77(In.)
Pipe flow velocity =     11.59(Ft/s)
Travel time through pipe =    0.12 min.
```

Time of concentration (TC) =   14.59 min.
End of computations, total study area =   84.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.909
Area averaged RI index number = 78.6

B.6 – RATIONAL METHOD ANALYSIS, 100-YEAR AREA "C"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 07/08/25 File:dc100.out

TRACT 31513
DEVELOPED
AREA "C"
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

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Process from Point/Station 3.000 to Point/Station 3.010
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 922.000(Ft.)
Top (of initial area) elevation = 1976.000(Ft.)
Bottom (of initial area) elevation = 1672.000(Ft.)
Difference in elevation = 304.000(Ft.)
Slope = 0.32972 s(percent)= 32.97
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.152 min.
Rainfall intensity = 2.917(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.881
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3) = 95.60
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 16.638(CFS)
Total initial stream area = 6.470(Ac.)
Pervious area fraction = 1.000

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.010 to Point/Station        3.020
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of natural channel elevation =   1672.000(Ft.)
End of natural channel elevation =   1577.500(Ft.)
Length of natural channel  =  1437.000(Ft.)
Estimated mean flow rate at midpoint of channel =     70.588(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =  10.97(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0658
Corrected/adjusted channel slope =  0.0658
Travel time =    2.18 min.     TC =   12.33  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.864
Decimal fraction soil group A = 0.300
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.700
RI index for soil(AMC 3)  =  92.44
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.647(In/Hr) for a   100.0 year storm
Subarea runoff =     95.995(CFS) for     41.960(Ac.)
Total runoff =    112.633(CFS)  Total area =      48.430(Ac.)


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Process from Point/Station        3.010 to Point/Station        3.020
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     48.430(Ac.)
Runoff from this stream =    112.633(CFS)
Time of concentration =   12.33 min.
Rainfall intensity =     2.647(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.030 to Point/Station        3.040
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   680.000(Ft.)
Top (of initial area) elevation =  2000.000(Ft.)
Bottom (of initial area) elevation =  1616.800(Ft.)
Difference in elevation =   383.200(Ft.)
Slope =    0.56353  s(percent)=      56.35
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.074 min.
Rainfall intensity =      3.271(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.880
```

```
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.900
RI index for soil(AMC 3)  =  94.72
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      5.210(CFS)
Total initial stream area =        1.810(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.040 to Point/Station        3.020
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1614.200(Ft.)
Downstream point/station elevation =  1614.000(Ft.)
Pipe length  =    39.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     5.210(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     5.210(CFS)
Normal flow depth in pipe =   11.02(In.)
Flow top width inside pipe =   17.54(In.)
Critical Depth =   10.55(In.)
Pipe flow velocity =      4.59(Ft/s)
Travel time through pipe =    0.14 min.
Time of concentration (TC) =     8.22 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.040 to Point/Station        3.020
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.810(Ac.)
Runoff from this stream =      5.210(CFS)
Time of concentration =    8.22 min.
Rainfall intensity =     3.243(In/Hr)
Program is now starting with Main Stream No. 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.050 to Point/Station        3.060
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   760.000(Ft.)
Top (of initial area) elevation =  2024.000(Ft.)
Bottom (of initial area) elevation =  1606.600(Ft.)
Difference in elevation =   417.400(Ft.)
Slope =    0.54921  s(percent)=      54.92
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.485 min.
Rainfall intensity =      3.191(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.883
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3)  =  95.60
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      7.213(CFS)
```

```
Total initial stream area =        2.560(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.060 to Point/Station        3.020
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1603.300(Ft.)
Downstream point/station elevation =  1580.200(Ft.)
Pipe length  =    82.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.213(CFS)
Given pipe size =     18.00(In.)
Calculated individual pipe flow  =     7.213(CFS)
Normal flow depth in pipe =    4.37(In.)
Flow top width inside pipe =   15.44(In.)
Critical Depth =   12.47(In.)
Pipe flow velocity =     21.74(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =     8.55 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.060 to Point/Station        3.020
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      2.560(Ac.)
Runoff from this stream =      7.213(CFS)
Time of concentration =    8.55 min.
Rainfall intensity =     3.179(In/Hr)
Summary of stream data:

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


1      112.633     12.33                2.647
2        5.210      8.22                3.243
3        7.213      8.55                3.179
Largest stream flow has longer time of concentration
Qp =    112.633 + sum of
          Qb         Ia/Ib
           5.210 *    0.816 =      4.252
          Qb         Ia/Ib
           7.213 *    0.832 =      6.005
Qp =    122.890

Total of 3 main streams to confluence:
Flow rates before confluence point:
     112.633       5.210       7.213
Area of streams before confluence:
       48.430        1.810        2.560


Results of confluence:
Total flow rate =    122.890(CFS)
Time of concentration =    12.334 min.
Effective stream area after confluence  =     52.800(Ac.)
End of computations, total study area =           52.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
```

```
Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  83.7
```

B.7 – RATIONAL METHOD ANALYSIS, 100-YEAR AREA "D"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 07/10/25 File:dd100.out

TRACT 31513 "TRES CERRITOS"
PROPOSED CONDITION
OFFSITE AREA "D"
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++

Process from Point/Station 4.000 to Point/Station 4.010
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 961.000(Ft.)
Top (of initial area) elevation = 1892.000(Ft.)
Bottom (of initial area) elevation = 1568.000(Ft.)
Difference in elevation = 324.000(Ft.)
Slope = 0.33715 s(percent)= 33.71
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.275 min.
Rainfall intensity = 2.900(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.881
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3) = 95.60
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 12.753(CFS)
Total initial stream area = 4.990(Ac.)
Pervious area fraction = 1.000

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        4.010 to Point/Station        4.020
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
Top of natural channel elevation =   1568.000(Ft.)
End of natural channel elevation =   1527.000(Ft.)
Length of natural channel  =   318.000(Ft.)
Estimated mean flow rate at midpoint of channel =     17.570(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =  10.04(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.1289
Corrected/adjusted channel slope =  0.1203
Travel time =    0.53 min.     TC =   10.80  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.881
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3)  =  95.60
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.828(In/Hr) for a   100.0 year storm
Subarea runoff =      9.391(CFS) for      3.770(Ac.)
Total runoff =     22.144(CFS)  Total area =       8.760(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        4.020 to Point/Station        4.030
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________________
Upstream point elevation =  1527.000(Ft.)
Downstream point elevation =  1507.500(Ft.)
Channel length thru subarea  =   694.000(Ft.)
Channel base width      =    0.000(Ft.)
Slope or 'Z' of left channel bank =   1.500
Slope or 'Z' of right channel bank =   1.500
Estimated mean flow rate at midpoint of channel =     26.813(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    2.500(Ft.)
Flow(q) thru subarea =     26.813(CFS)
Depth of flow =   1.280(Ft.), Average velocity =  10.910(Ft/s)
Channel flow top width =    3.840(Ft.)
Flow Velocity =   10.91(Ft/s)
Travel time  =    1.06 min.
Time of concentration =   11.86 min.

Sub-Channel No. 1 Critical depth =      1.813(Ft.)
  '     '       '     Critical flow top width =      5.438(Ft.)
  '     '       '     Critical flow velocity=    5.441(Ft/s)
  '     '       '     Critical flow area =      4.928(Sq.Ft)

 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
```

```
Runoff Coefficient = 0.880
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 3)  =  95.60
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.699(In/Hr) for a   100.0 year storm
Subarea runoff =      9.262(CFS) for      3.900(Ac.)
Total runoff =     31.406(CFS)  Total area =      12.660(Ac.)
Depth of flow =   1.358(Ft.), Average velocity =  11.350(Ft/s)

Sub-Channel No. 1 Critical depth =      1.938(Ft.)
  '     '       '     Critical flow top width =      5.813(Ft.)
  '     '       '     Critical flow velocity=    5.577(Ft/s)
  '     '       '     Critical flow area =      5.631(Sq.Ft)



++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        4.030 to Point/Station        4.040
**** PIPEFLOW TRAVEL TIME (User specified size) ****
________________________________________________________________________
Upstream point/station elevation =  1504.000(Ft.)
Downstream point/station elevation =  1502.700(Ft.)
Pipe length  =   244.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    31.406(CFS)
Given pipe size =     30.00(In.)
Calculated individual pipe flow  =    31.406(CFS)
Normal flow depth in pipe =   26.16(In.)
Flow top width inside pipe =   20.05(In.)
Critical Depth =   22.90(In.)
Pipe flow velocity =      6.91(Ft/s)
Travel time through pipe =    0.59 min.
Time of concentration (TC) =    12.45 min.
End of computations, total study area =           12.66 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  89.0
```

B.8 – RATIONAL METHOD ANALYSIS, 100-YEAR AREA "E"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 12/06/24 File:TCPE100.out

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
PROPOSED CONDITION
OFFSITE AREA "E"
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++

Process from Point/Station 500.000 to Point/Station 501.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 276.000(Ft.)
Top (of initial area) elevation = 1597.000(Ft.)
Bottom (of initial area) elevation = 1508.900(Ft.)
Difference in elevation = 88.100(Ft.)
Slope = 0.31920 s(percent)= 31.92
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 6.307 min.
Rainfall intensity = 3.701(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea

Runoff Coefficient = 0.882
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.250
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.750
RI index for soil(AMC 3) = 94.50
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 4.176(CFS)
Total initial stream area = 1.280(Ac.)
Pervious area fraction = 1.000
End of computations, total study area = 1.28 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number = 86.3

B.7 – RATIONAL METHOD ANALYSIS, 100-YEAR AREA "F"

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 12/18/24 File:TCPF100.out

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
PROPOSED CONDITION
OFFSITE AREA F - VERNAL POOL TRIBUTARY
100-YEAR

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

English (in-lb) Units used in input data file

Program License Serial Number 6545

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

2 year, 1 hour precipitation = 0.500(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++

Process from Point/Station 600.000 to Point/Station 601.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 722.000(Ft.)
Top (of initial area) elevation = 1922.000(Ft.)
Bottom (of initial area) elevation = 1555.500(Ft.)
Difference in elevation = 366.500(Ft.)
Slope = 0.50762 s(percent)= 50.76
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.445 min.
Rainfall intensity = 3.199(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea

```
Runoff Coefficient = 0.880
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.900
RI index for soil(AMC 3)  =  94.72
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      7.652(CFS)
Total initial stream area =        2.720(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      601.000 to Point/Station      602.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1555.500(Ft.)
Downstream point elevation =  1524.500(Ft.)
Channel length thru subarea  =   980.000(Ft.)
Channel base width      =    0.000(Ft.)
Slope or 'Z' of left channel bank =   1.500
Slope or 'Z' of right channel bank =   1.500
Estimated mean flow rate at midpoint of channel =     24.895(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    2.500(Ft.)
Flow(q) thru subarea =     24.895(CFS)
Depth of flow =   1.218(Ft.), Average velocity =  11.196(Ft/s)
Channel flow top width =    3.653(Ft.)
Flow Velocity =   11.20(Ft/s)
Travel time  =    1.46 min.
Time of concentration =    9.90 min.

Sub-Channel No. 1 Critical depth =      1.766(Ft.)
  '     '       '     Critical flow top width =      5.297(Ft.)
  '     '       '     Critical flow velocity=    5.324(Ft/s)
  '     '       '     Critical flow area =      4.676(Sq.Ft)

 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.876
Decimal fraction soil group A = 0.150
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.850
RI index for soil(AMC 3)  =  94.28
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.954(In/Hr) for a   100.0 year storm
Subarea runoff =     34.387(CFS) for     13.290(Ac.)
Total runoff =     42.040(CFS)  Total area =      16.010(Ac.)
Depth of flow =   1.482(Ft.), Average velocity =  12.763(Ft/s)

Sub-Channel No. 1 Critical depth =      2.172(Ft.)
```

```
  '     '       '     Critical flow top width =      6.516(Ft.)
  '     '       '     Critical flow velocity=    5.942(Ft/s)
  '     '       '     Critical flow area =      7.076(Sq.Ft)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      602.000 to Point/Station      603.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1524.500(Ft.)
Downstream point elevation =  1502.300(Ft.)
Channel length thru subarea  =  1150.000(Ft.)
Channel base width      =    0.000(Ft.)
Slope or 'Z' of left channel bank =   1.500
Slope or 'Z' of right channel bank =   1.500
Estimated mean flow rate at midpoint of channel =     52.290(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    2.500(Ft.)
Flow(q) thru subarea =     52.290(CFS)
Depth of flow =   1.764(Ft.), Average velocity =  11.200(Ft/s)
Channel flow top width =    5.293(Ft.)
Flow Velocity =   11.20(Ft/s)
Travel time  =    1.71 min.
Time of concentration =   11.61 min.

Sub-Channel No. 1 Critical depth =      2.375(Ft.)
  '     '       '     Critical flow top width =      7.125(Ft.)
  '     '       '     Critical flow velocity=    6.180(Ft/s)
  '     '       '     Critical flow area =      8.461(Sq.Ft)

 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.867
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.350
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.550
RI index for soil(AMC 3)  =  92.77
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.727(In/Hr) for a   100.0 year storm
Subarea runoff =     20.430(CFS) for      8.640(Ac.)
Total runoff =     62.469(CFS)  Total area =      24.650(Ac.)
Depth of flow =   1.886(Ft.), Average velocity =  11.709(Ft/s)

Sub-Channel No. 1 Critical depth =      2.547(Ft.)
  '     '       '     Critical flow top width =      7.500(Ft.)
  '     '       '     Critical flow velocity=    6.423(Ft/s)
  '     '       '     Critical flow area =      9.727(Sq.Ft)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      603.000 to Point/Station      603.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.824
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.150
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.350
RI index for soil(AMC 3)  =  70.52
Pervious area fraction =  0.500; Impervious fraction =  0.500
Time of concentration =    11.61 min.
Rainfall intensity =      2.727(In/Hr) for a   100.0 year storm
Subarea runoff =      6.717(CFS) for      2.990(Ac.)
Total runoff =     69.186(CFS)  Total area =      27.640(Ac.)
End of computations, total study area =           27.64 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.946
Area averaged RI index number =  81.2
```

Unit Hydrograph Models C

- C.1 - Existing "XA"
- C.2 - Existing "XB"
- C.3 - Existing "XC"
- C.4 - Area "A" (Tributary to Basin A)
- C.5 - Area "B" (Tributary to Basin B)
- C.6 - Area "C" (Tributary to Basin C)
- C.7 - Area "D"
- C.8 - Area "E"
- C.9 - Area "F"

UNIT HYDROGRAPH - EXISTING

AREA	ACRES	2-YEAR OUTFLOW (CFS)				*2-YEAR VOLUME (AC-FT)*				10-YEAR OUTFLOW (CFS)				*10-YEAR VOLUME (AC-FT)*			
		1HR	3HR	6HR	24HR	*1HR*	*3HR*	*6HR*	*24HR*	1HR	3HR	6HR	24HR	*1HR*	*3HR*	*6HR*	*24HR*
XA	104.71	42.8	18.3	17.1	2.47	*1.47*	*1.15*	*1.47*	*1.57*	104.7	64.3	60.0	16.0	*4.61*	*4.45*	*5.24*	*4.42*
XB	19.51	15.4	6.5	6.1	0.48	*0.33*	*0.28*	*0.35*	*0.29*	31.5	16.6	14.9	4.7	*0.99*	*1.11*	*1.27*	*1.32*
XC	40.56	25.3	8.6	8.3	0.99	*0.55*	*0.42*	*0.54*	*0.61*	57.0	29.5	26.7	6.1	*1.72*	*1.61*	*1.90*	*1.50*
TOTAL	**164.78**	**83.5**	**33.4**	**31.6**	**3.93**	***2.35***	***1.85***	**2.36**	**2.47**	**193.3**	**110.4**	**101.6**	**26.8**	***7.31***	***7.17***	***8.41***	***7.24***

UNIT HYDROGRAPH - PROPOSED

AREA	ACRES	2-YEAR OUTFLOW (CFS)				*2-YEAR VOLUME (AC-FT)*				10-YEAR OUTFLOW (CFS)				*10-YEAR VOLUME (AC-FT)*			
		1HR	3HR	6HR	24HR	*1HR*	*3HR*	*6HR*	*24HR*	1HR	3HR	6HR	24HR	*1HR*	*3HR*	*6HR*	*24HR*
A	39.37	64.9	16.4	16.5	5.5	*1.82*	*1.49*	*2.24*	*3.36*	64.9	31.8	29.9	9.2	*1.82*	*2.46*	*3.43*	*5.57*
B	32.06	23.2	8.9	8.8	2.3	*0.60*	*0.67*	*0.97*	*1.40*	47.3	25.2	23.8	4.9	*1.36*	*1.48*	*1.91*	*2.32*
C	52.80	40.2	16.5	16.4	1.3	*0.83*	*0.70*	*0.88*	*0.79*	84.6	44.6	42.3	11.8	*2.58*	*2.76*	*3.20*	*3.11*
D	12.73	11.0	5.1	5.0	0.31	*0.25*	*0.22*	*0.27*	*0.19*	21.3	11.4	10.7	3.5	*0.68*	*0.84*	*0.98*	*1.12*
E	1.28	1.5	0.55	0.56	0.03	*0.022*	*0.019*	*0.024*	*0.019*	2.9	1.3	1.2	0.32	*0.07*	*0.08*	*0.09*	*0.09*
F	27.89	21.2	8.0	7.5	0.90	*0.44*	*0.39*	*0.51*	*0.55*	44.7	22.8	20.7	5.7	*1.13*	*1.36*	*1.63*	*1.59*
TOTAL	**166.1**	**162.0**	**55.5**	**54.7**	**10.38**	***3.96***	***3.49***	***4.90***	***6.31***	**265.6**	**137.2**	**128.6**	**35.4**	***7.64***	***8.97***	***11.23***	***13.79***
DELTA	**1.3**	**78.4**	**22.1**	**23.2**	**6.45**	***1.61***	***1.64***	***2.54***	***3.84***	**72.3**	**26.9**	**27.0**	**8.62**	***0.33***	***1.80***	***2.82***	***6.55***

C.1 – EXISTING UNIT HYDROGRAPH ANALYSIS, AREA “XA”

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

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Study date 07/10/25 File: xa242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 "TRES CERRITOS" PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
EXISTING AREA "XA" (WEST)
2-YEAR
24-HOUR

Drainage Area = 104.71(Ac.) = 0.164 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 104.71(Ac.) = 0.164 Sq. Mi.
Length along longest watercourse = 6713.00(Ft.)
Length along longest watercourse measured to centroid = 4064.00(Ft.)
Length along longest watercourse = 1.271 Mi.
Length along longest watercourse measured to centroid = 0.770 Mi.
Difference in elevation = 473.30(Ft.)
Slope along watercourse = 372.2663 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.232 Hr.
Lag time = 13.91 Min.
25% of lag time = 3.48 Min.
40% of lag time = 5.57 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
104.71	1.80	188.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
104.71	4.50	471.19

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
104.710	78.70	0.000

Total Area Entered = 104.71(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.7	61.4	0.454	0.000	0.454	1.000	0.454
					Sum (F) =	0.454

Area averaged mean soil loss (F) (In/Hr) = 0.454
Minimum soil loss rate ((In/Hr)) = 0.227
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	35.935	3.722	3.928
2	0.167	71.870	14.771	15.587
3	0.250	107.805	24.030	25.358
4	0.333	143.741	19.261	20.326
5	0.417	179.676	9.985	10.537
6	0.500	215.611	5.788	6.108
7	0.583	251.546	4.277	4.513
8	0.667	287.481	3.350	3.535
9	0.750	323.416	2.618	2.763
10	0.833	359.352	2.163	2.282
11	0.917	395.287	1.738	1.835
12	1.000	431.222	1.418	1.497
13	1.083	467.157	1.145	1.209
14	1.167	503.092	1.087	1.147
15	1.250	539.027	0.911	0.961
16	1.333	574.962	0.756	0.798
17	1.417	610.898	0.647	0.683
18	1.500	646.833	0.538	0.568
19	1.583	682.768	0.443	0.468
20	1.667	718.703	0.360	0.380
21	1.750	754.638	0.359	0.379
22	1.833	790.573	0.359	0.379
23	1.917	826.509	0.274	0.289
			Sum = 100.000	Sum= 105.528

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.806)	0.013	0.001
2	0.17	0.07	0.014	(0.802)	0.013	0.001
3	0.25	0.07	0.014	(0.799)	0.013	0.001

4	0.33	0.10	0.022	(0.796)	0.019	0.002
5	0.42	0.10	0.022	(0.793)	0.019	0.002
6	0.50	0.10	0.022	(0.790)	0.019	0.002
7	0.58	0.10	0.022	(0.787)	0.019	0.002
8	0.67	0.10	0.022	(0.784)	0.019	0.002
9	0.75	0.10	0.022	(0.781)	0.019	0.002
10	0.83	0.13	0.029	(0.778)	0.026	0.003
11	0.92	0.13	0.029	(0.775)	0.026	0.003
12	1.00	0.13	0.029	(0.772)	0.026	0.003
13	1.08	0.10	0.022	(0.769)	0.019	0.002
14	1.17	0.10	0.022	(0.766)	0.019	0.002
15	1.25	0.10	0.022	(0.763)	0.019	0.002
16	1.33	0.10	0.022	(0.760)	0.019	0.002
17	1.42	0.10	0.022	(0.756)	0.019	0.002
18	1.50	0.10	0.022	(0.753)	0.019	0.002
19	1.58	0.10	0.022	(0.750)	0.019	0.002
20	1.67	0.10	0.022	(0.747)	0.019	0.002
21	1.75	0.10	0.022	(0.744)	0.019	0.002
22	1.83	0.13	0.029	(0.741)	0.026	0.003
23	1.92	0.13	0.029	(0.738)	0.026	0.003
24	2.00	0.13	0.029	(0.735)	0.026	0.003
25	2.08	0.13	0.029	(0.733)	0.026	0.003
26	2.17	0.13	0.029	(0.730)	0.026	0.003
27	2.25	0.13	0.029	(0.727)	0.026	0.003
28	2.33	0.13	0.029	(0.724)	0.026	0.003
29	2.42	0.13	0.029	(0.721)	0.026	0.003
30	2.50	0.13	0.029	(0.718)	0.026	0.003
31	2.58	0.17	0.036	(0.715)	0.032	0.004
32	2.67	0.17	0.036	(0.712)	0.032	0.004
33	2.75	0.17	0.036	(0.709)	0.032	0.004
34	2.83	0.17	0.036	(0.706)	0.032	0.004
35	2.92	0.17	0.036	(0.703)	0.032	0.004
36	3.00	0.17	0.036	(0.700)	0.032	0.004
37	3.08	0.17	0.036	(0.697)	0.032	0.004
38	3.17	0.17	0.036	(0.694)	0.032	0.004
39	3.25	0.17	0.036	(0.692)	0.032	0.004
40	3.33	0.17	0.036	(0.689)	0.032	0.004
41	3.42	0.17	0.036	(0.686)	0.032	0.004
42	3.50	0.17	0.036	(0.683)	0.032	0.004
43	3.58	0.17	0.036	(0.680)	0.032	0.004
44	3.67	0.17	0.036	(0.677)	0.032	0.004
45	3.75	0.17	0.036	(0.674)	0.032	0.004
46	3.83	0.20	0.043	(0.671)	0.039	0.004
47	3.92	0.20	0.043	(0.669)	0.039	0.004
48	4.00	0.20	0.043	(0.666)	0.039	0.004
49	4.08	0.20	0.043	(0.663)	0.039	0.004
50	4.17	0.20	0.043	(0.660)	0.039	0.004
51	4.25	0.20	0.043	(0.657)	0.039	0.004
52	4.33	0.23	0.050	(0.655)	0.045	0.005
53	4.42	0.23	0.050	(0.652)	0.045	0.005
54	4.50	0.23	0.050	(0.649)	0.045	0.005
55	4.58	0.23	0.050	(0.646)	0.045	0.005
56	4.67	0.23	0.050	(0.643)	0.045	0.005
57	4.75	0.23	0.050	(0.641)	0.045	0.005
58	4.83	0.27	0.058	(0.638)	0.052	0.006
59	4.92	0.27	0.058	(0.635)	0.052	0.006
60	5.00	0.27	0.058	(0.632)	0.052	0.006
61	5.08	0.20	0.043	(0.630)	0.039	0.004
62	5.17	0.20	0.043	(0.627)	0.039	0.004
63	5.25	0.20	0.043	(0.624)	0.039	0.004
64	5.33	0.23	0.050	(0.621)	0.045	0.005
65	5.42	0.23	0.050	(0.619)	0.045	0.005
66	5.50	0.23	0.050	(0.616)	0.045	0.005

67	5.58	0.27	0.058	(0.613)	0.052	0.006
68	5.67	0.27	0.058	(0.611)	0.052	0.006
69	5.75	0.27	0.058	(0.608)	0.052	0.006
70	5.83	0.27	0.058	(0.605)	0.052	0.006
71	5.92	0.27	0.058	(0.603)	0.052	0.006
72	6.00	0.27	0.058	(0.600)	0.052	0.006
73	6.08	0.30	0.065	(0.597)	0.058	0.006
74	6.17	0.30	0.065	(0.595)	0.058	0.006
75	6.25	0.30	0.065	(0.592)	0.058	0.006
76	6.33	0.30	0.065	(0.589)	0.058	0.006
77	6.42	0.30	0.065	(0.587)	0.058	0.006
78	6.50	0.30	0.065	(0.584)	0.058	0.006
79	6.58	0.33	0.072	(0.581)	0.065	0.007
80	6.67	0.33	0.072	(0.579)	0.065	0.007
81	6.75	0.33	0.072	(0.576)	0.065	0.007
82	6.83	0.33	0.072	(0.574)	0.065	0.007
83	6.92	0.33	0.072	(0.571)	0.065	0.007
84	7.00	0.33	0.072	(0.568)	0.065	0.007
85	7.08	0.33	0.072	(0.566)	0.065	0.007
86	7.17	0.33	0.072	(0.563)	0.065	0.007
87	7.25	0.33	0.072	(0.561)	0.065	0.007
88	7.33	0.37	0.079	(0.558)	0.071	0.008
89	7.42	0.37	0.079	(0.556)	0.071	0.008
90	7.50	0.37	0.079	(0.553)	0.071	0.008
91	7.58	0.40	0.086	(0.550)	0.078	0.009
92	7.67	0.40	0.086	(0.548)	0.078	0.009
93	7.75	0.40	0.086	(0.545)	0.078	0.009
94	7.83	0.43	0.094	(0.543)	0.084	0.009
95	7.92	0.43	0.094	(0.540)	0.084	0.009
96	8.00	0.43	0.094	(0.538)	0.084	0.009
97	8.08	0.50	0.108	(0.535)	0.097	0.011
98	8.17	0.50	0.108	(0.533)	0.097	0.011
99	8.25	0.50	0.108	(0.530)	0.097	0.011
100	8.33	0.50	0.108	(0.528)	0.097	0.011
101	8.42	0.50	0.108	(0.525)	0.097	0.011
102	8.50	0.50	0.108	(0.523)	0.097	0.011
103	8.58	0.53	0.115	(0.520)	0.104	0.012
104	8.67	0.53	0.115	(0.518)	0.104	0.012
105	8.75	0.53	0.115	(0.516)	0.104	0.012
106	8.83	0.57	0.122	(0.513)	0.110	0.012
107	8.92	0.57	0.122	(0.511)	0.110	0.012
108	9.00	0.57	0.122	(0.508)	0.110	0.012
109	9.08	0.63	0.137	(0.506)	0.123	0.014
110	9.17	0.63	0.137	(0.504)	0.123	0.014
111	9.25	0.63	0.137	(0.501)	0.123	0.014
112	9.33	0.67	0.144	(0.499)	0.130	0.014
113	9.42	0.67	0.144	(0.496)	0.130	0.014
114	9.50	0.67	0.144	(0.494)	0.130	0.014
115	9.58	0.70	0.151	(0.492)	0.136	0.015
116	9.67	0.70	0.151	(0.489)	0.136	0.015
117	9.75	0.70	0.151	(0.487)	0.136	0.015
118	9.83	0.73	0.158	(0.485)	0.143	0.016
119	9.92	0.73	0.158	(0.482)	0.143	0.016
120	10.00	0.73	0.158	(0.480)	0.143	0.016
121	10.08	0.50	0.108	(0.478)	0.097	0.011
122	10.17	0.50	0.108	(0.475)	0.097	0.011
123	10.25	0.50	0.108	(0.473)	0.097	0.011
124	10.33	0.50	0.108	(0.471)	0.097	0.011
125	10.42	0.50	0.108	(0.468)	0.097	0.011
126	10.50	0.50	0.108	(0.466)	0.097	0.011
127	10.58	0.67	0.144	(0.464)	0.130	0.014
128	10.67	0.67	0.144	(0.462)	0.130	0.014
129	10.75	0.67	0.144	(0.459)	0.130	0.014

130	10.83	0.67	0.144	(0.457)	0.130	0.014
131	10.92	0.67	0.144	(0.455)	0.130	0.014
132	11.00	0.67	0.144	(0.453)	0.130	0.014
133	11.08	0.63	0.137	(0.450)	0.123	0.014
134	11.17	0.63	0.137	(0.448)	0.123	0.014
135	11.25	0.63	0.137	(0.446)	0.123	0.014
136	11.33	0.63	0.137	(0.444)	0.123	0.014
137	11.42	0.63	0.137	(0.441)	0.123	0.014
138	11.50	0.63	0.137	(0.439)	0.123	0.014
139	11.58	0.57	0.122	(0.437)	0.110	0.012
140	11.67	0.57	0.122	(0.435)	0.110	0.012
141	11.75	0.57	0.122	(0.433)	0.110	0.012
142	11.83	0.60	0.130	(0.431)	0.117	0.013
143	11.92	0.60	0.130	(0.428)	0.117	0.013
144	12.00	0.60	0.130	(0.426)	0.117	0.013
145	12.08	0.83	0.180	(0.424)	0.162	0.018
146	12.17	0.83	0.180	(0.422)	0.162	0.018
147	12.25	0.83	0.180	(0.420)	0.162	0.018
148	12.33	0.87	0.187	(0.418)	0.168	0.019
149	12.42	0.87	0.187	(0.416)	0.168	0.019
150	12.50	0.87	0.187	(0.414)	0.168	0.019
151	12.58	0.93	0.202	(0.412)	0.181	0.020
152	12.67	0.93	0.202	(0.410)	0.181	0.020
153	12.75	0.93	0.202	(0.407)	0.181	0.020
154	12.83	0.97	0.209	(0.405)	0.188	0.021
155	12.92	0.97	0.209	(0.403)	0.188	0.021
156	13.00	0.97	0.209	(0.401)	0.188	0.021
157	13.08	1.13	0.245	(0.399)	0.220	0.024
158	13.17	1.13	0.245	(0.397)	0.220	0.024
159	13.25	1.13	0.245	(0.395)	0.220	0.024
160	13.33	1.13	0.245	(0.393)	0.220	0.024
161	13.42	1.13	0.245	(0.391)	0.220	0.024
162	13.50	1.13	0.245	(0.389)	0.220	0.024
163	13.58	0.77	0.166	(0.387)	0.149	0.017
164	13.67	0.77	0.166	(0.385)	0.149	0.017
165	13.75	0.77	0.166	(0.383)	0.149	0.017
166	13.83	0.77	0.166	(0.381)	0.149	0.017
167	13.92	0.77	0.166	(0.379)	0.149	0.017
168	14.00	0.77	0.166	(0.377)	0.149	0.017
169	14.08	0.90	0.194	(0.376)	0.175	0.019
170	14.17	0.90	0.194	(0.374)	0.175	0.019
171	14.25	0.90	0.194	(0.372)	0.175	0.019
172	14.33	0.87	0.187	(0.370)	0.168	0.019
173	14.42	0.87	0.187	(0.368)	0.168	0.019
174	14.50	0.87	0.187	(0.366)	0.168	0.019
175	14.58	0.87	0.187	(0.364)	0.168	0.019
176	14.67	0.87	0.187	(0.362)	0.168	0.019
177	14.75	0.87	0.187	(0.360)	0.168	0.019
178	14.83	0.83	0.180	(0.359)	0.162	0.018
179	14.92	0.83	0.180	(0.357)	0.162	0.018
180	15.00	0.83	0.180	(0.355)	0.162	0.018
181	15.08	0.80	0.173	(0.353)	0.155	0.017
182	15.17	0.80	0.173	(0.351)	0.155	0.017
183	15.25	0.80	0.173	(0.350)	0.155	0.017
184	15.33	0.77	0.166	(0.348)	0.149	0.017
185	15.42	0.77	0.166	(0.346)	0.149	0.017
186	15.50	0.77	0.166	(0.344)	0.149	0.017
187	15.58	0.63	0.137	(0.342)	0.123	0.014
188	15.67	0.63	0.137	(0.341)	0.123	0.014
189	15.75	0.63	0.137	(0.339)	0.123	0.014
190	15.83	0.63	0.137	(0.337)	0.123	0.014
191	15.92	0.63	0.137	(0.335)	0.123	0.014
192	16.00	0.63	0.137	(0.334)	0.123	0.014

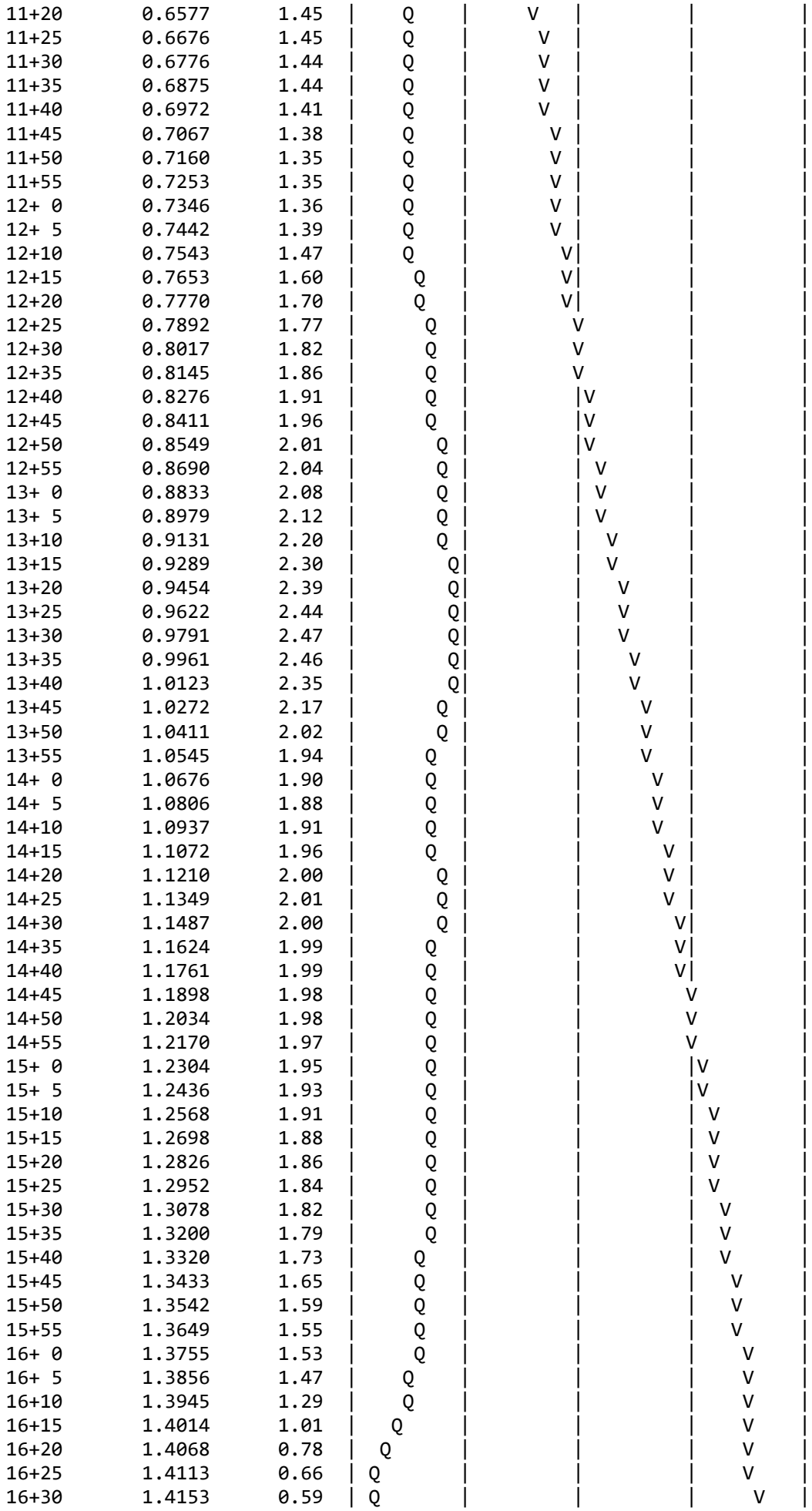
193	16.08	0.13	0.029	(0.332)	0.026	0.003
194	16.17	0.13	0.029	(0.330)	0.026	0.003
195	16.25	0.13	0.029	(0.329)	0.026	0.003
196	16.33	0.13	0.029	(0.327)	0.026	0.003
197	16.42	0.13	0.029	(0.325)	0.026	0.003
198	16.50	0.13	0.029	(0.324)	0.026	0.003
199	16.58	0.10	0.022	(0.322)	0.019	0.002
200	16.67	0.10	0.022	(0.320)	0.019	0.002
201	16.75	0.10	0.022	(0.319)	0.019	0.002
202	16.83	0.10	0.022	(0.317)	0.019	0.002
203	16.92	0.10	0.022	(0.316)	0.019	0.002
204	17.00	0.10	0.022	(0.314)	0.019	0.002
205	17.08	0.17	0.036	(0.312)	0.032	0.004
206	17.17	0.17	0.036	(0.311)	0.032	0.004
207	17.25	0.17	0.036	(0.309)	0.032	0.004
208	17.33	0.17	0.036	(0.308)	0.032	0.004
209	17.42	0.17	0.036	(0.306)	0.032	0.004
210	17.50	0.17	0.036	(0.305)	0.032	0.004
211	17.58	0.17	0.036	(0.303)	0.032	0.004
212	17.67	0.17	0.036	(0.302)	0.032	0.004
213	17.75	0.17	0.036	(0.300)	0.032	0.004
214	17.83	0.13	0.029	(0.299)	0.026	0.003
215	17.92	0.13	0.029	(0.297)	0.026	0.003
216	18.00	0.13	0.029	(0.296)	0.026	0.003
217	18.08	0.13	0.029	(0.294)	0.026	0.003
218	18.17	0.13	0.029	(0.293)	0.026	0.003
219	18.25	0.13	0.029	(0.291)	0.026	0.003
220	18.33	0.13	0.029	(0.290)	0.026	0.003
221	18.42	0.13	0.029	(0.288)	0.026	0.003
222	18.50	0.13	0.029	(0.287)	0.026	0.003
223	18.58	0.10	0.022	(0.286)	0.019	0.002
224	18.67	0.10	0.022	(0.284)	0.019	0.002
225	18.75	0.10	0.022	(0.283)	0.019	0.002
226	18.83	0.07	0.014	(0.282)	0.013	0.001
227	18.92	0.07	0.014	(0.280)	0.013	0.001
228	19.00	0.07	0.014	(0.279)	0.013	0.001
229	19.08	0.10	0.022	(0.278)	0.019	0.002
230	19.17	0.10	0.022	(0.276)	0.019	0.002
231	19.25	0.10	0.022	(0.275)	0.019	0.002
232	19.33	0.13	0.029	(0.274)	0.026	0.003
233	19.42	0.13	0.029	(0.272)	0.026	0.003
234	19.50	0.13	0.029	(0.271)	0.026	0.003
235	19.58	0.10	0.022	(0.270)	0.019	0.002
236	19.67	0.10	0.022	(0.269)	0.019	0.002
237	19.75	0.10	0.022	(0.267)	0.019	0.002
238	19.83	0.07	0.014	(0.266)	0.013	0.001
239	19.92	0.07	0.014	(0.265)	0.013	0.001
240	20.00	0.07	0.014	(0.264)	0.013	0.001
241	20.08	0.10	0.022	(0.263)	0.019	0.002
242	20.17	0.10	0.022	(0.262)	0.019	0.002
243	20.25	0.10	0.022	(0.260)	0.019	0.002
244	20.33	0.10	0.022	(0.259)	0.019	0.002
245	20.42	0.10	0.022	(0.258)	0.019	0.002
246	20.50	0.10	0.022	(0.257)	0.019	0.002
247	20.58	0.10	0.022	(0.256)	0.019	0.002
248	20.67	0.10	0.022	(0.255)	0.019	0.002
249	20.75	0.10	0.022	(0.254)	0.019	0.002
250	20.83	0.07	0.014	(0.253)	0.013	0.001
251	20.92	0.07	0.014	(0.252)	0.013	0.001
252	21.00	0.07	0.014	(0.251)	0.013	0.001
253	21.08	0.10	0.022	(0.250)	0.019	0.002
254	21.17	0.10	0.022	(0.249)	0.019	0.002
255	21.25	0.10	0.022	(0.248)	0.019	0.002

```
256  21.33     0.07      0.014       (  0.247)       0.013        0.001
257  21.42     0.07      0.014       (  0.246)       0.013        0.001
258  21.50     0.07      0.014       (  0.245)       0.013        0.001
259  21.58     0.10      0.022       (  0.244)       0.019        0.002
260  21.67     0.10      0.022       (  0.243)       0.019        0.002
261  21.75     0.10      0.022       (  0.242)       0.019        0.002
262  21.83     0.07      0.014       (  0.242)       0.013        0.001
263  21.92     0.07      0.014       (  0.241)       0.013        0.001
264  22.00     0.07      0.014       (  0.240)       0.013        0.001
265  22.08     0.10      0.022       (  0.239)       0.019        0.002
266  22.17     0.10      0.022       (  0.238)       0.019        0.002
267  22.25     0.10      0.022       (  0.238)       0.019        0.002
268  22.33     0.07      0.014       (  0.237)       0.013        0.001
269  22.42     0.07      0.014       (  0.236)       0.013        0.001
270  22.50     0.07      0.014       (  0.235)       0.013        0.001
271  22.58     0.07      0.014       (  0.235)       0.013        0.001
272  22.67     0.07      0.014       (  0.234)       0.013        0.001
273  22.75     0.07      0.014       (  0.233)       0.013        0.001
274  22.83     0.07      0.014       (  0.233)       0.013        0.001
275  22.92     0.07      0.014       (  0.232)       0.013        0.001
276  23.00     0.07      0.014       (  0.232)       0.013        0.001
277  23.08     0.07      0.014       (  0.231)       0.013        0.001
278  23.17     0.07      0.014       (  0.231)       0.013        0.001
279  23.25     0.07      0.014       (  0.230)       0.013        0.001
280  23.33     0.07      0.014       (  0.230)       0.013        0.001
281  23.42     0.07      0.014       (  0.229)       0.013        0.001
282  23.50     0.07      0.014       (  0.229)       0.013        0.001
283  23.58     0.07      0.014       (  0.228)       0.013        0.001
284  23.67     0.07      0.014       (  0.228)       0.013        0.001
285  23.75     0.07      0.014       (  0.228)       0.013        0.001
286  23.83     0.07      0.014       (  0.228)       0.013        0.001
287  23.92     0.07      0.014       (  0.227)       0.013        0.001
288  24.00     0.07      0.014       (  0.227)       0.013        0.001
                (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     2.2
       Flood volume = Effective rainfall      0.18(In)
        times area     104.7(Ac.)/[(In)/(Ft.)] =       1.6(Ac.Ft)
       Total soil loss =      1.62(In)
       Total soil loss =    14.133(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =       68403.5 Cubic Feet
       Total soil loss =      615631.7 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      2.466(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0000      0.01  Q         |         |         |         |
   0+10       0.0002      0.03  Q         |         |         |         |
   0+15       0.0007      0.06  Q         |         |         |         |
   0+20       0.0013      0.10  Q         |         |         |         |
   0+25       0.0022      0.12  Q         |         |         |         |
   0+30       0.0032      0.15  Q         |         |         |         |
   0+35       0.0044      0.17  Q         |         |         |         |
   0+40       0.0057      0.18  Q         |         |         |         |
   0+45       0.0070      0.19  Q         |         |         |         |
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0+50	0.0084	0.20	Q	|	|	|	|
0+55	0.0099	0.22	Q	|	|	|	|
1+ 0	0.0115	0.24	Q	|	|	|	|
1+ 5	0.0133	0.26	VQ	|	|	|	|
1+10	0.0151	0.26	VQ	|	|	|	|
1+15	0.0167	0.24	Q	|	|	|	|
1+20	0.0184	0.23	Q	|	|	|	|
1+25	0.0200	0.23	Q	|	|	|	|
1+30	0.0215	0.23	Q	|	|	|	|
1+35	0.0231	0.23	Q	|	|	|	|
1+40	0.0247	0.23	Q	|	|	|	|
1+45	0.0263	0.23	Q	|	|	|	|
1+50	0.0279	0.23	Q	|	|	|	|
1+55	0.0296	0.24	Q	|	|	|	|
2+ 0	0.0314	0.26	VQ	|	|	|	|
2+ 5	0.0333	0.28	VQ	|	|	|	|
2+10	0.0352	0.28	VQ	|	|	|	|
2+15	0.0372	0.29	VQ	|	|	|	|
2+20	0.0392	0.29	VQ	|	|	|	|
2+25	0.0413	0.29	|Q	|	|	|	|
2+30	0.0433	0.30	|Q	|	|	|	|
2+35	0.0454	0.30	|Q	|	|	|	|
2+40	0.0475	0.31	|Q	|	|	|	|
2+45	0.0498	0.33	|Q	|	|	|	|
2+50	0.0522	0.35	|Q	|	|	|	|
2+55	0.0546	0.36	|Q	|	|	|	|
3+ 0	0.0571	0.36	|Q	|	|	|	|
3+ 5	0.0596	0.36	|Q	|	|	|	|
3+10	0.0621	0.37	|Q	|	|	|	|
3+15	0.0647	0.37	|Q	|	|	|	|
3+20	0.0672	0.37	|Q	|	|	|	|
3+25	0.0698	0.37	|Q	|	|	|	|
3+30	0.0724	0.37	|Q	|	|	|	|
3+35	0.0750	0.38	|Q	|	|	|	|
3+40	0.0776	0.38	|Q	|	|	|	|
3+45	0.0802	0.38	|QV	|	|	|	|
3+50	0.0828	0.38	|QV	|	|	|	|
3+55	0.0855	0.39	|QV	|	|	|	|
4+ 0	0.0883	0.41	|QV	|	|	|	|
4+ 5	0.0913	0.43	|QV	|	|	|	|
4+10	0.0942	0.43	|QV	|	|	|	|
4+15	0.0973	0.44	|QV	|	|	|	|
4+20	0.1003	0.44	|QV	|	|	|	|
4+25	0.1035	0.46	|QV	|	|	|	|
4+30	0.1068	0.48	|QV	|	|	|	|
4+35	0.1102	0.50	|QV	|	|	|	|
4+40	0.1137	0.50	| Q	|	|	|	|
4+45	0.1172	0.51	| Q	|	|	|	|
4+50	0.1207	0.52	| QV	|	|	|	|
4+55	0.1244	0.53	| QV	|	|	|	|
5+ 0	0.1282	0.55	| QV	|	|	|	|
5+ 5	0.1321	0.56	| QV	|	|	|	|
5+10	0.1359	0.55	| QV	|	|	|	|
5+15	0.1394	0.52	| QV	|	|	|	|
5+20	0.1429	0.50	|Q V	|	|	|	|
5+25	0.1463	0.50	|Q V	|	|	|	|
5+30	0.1498	0.51	| QV	|	|	|	|
5+35	0.1534	0.52	| QV	|	|	|	|
5+40	0.1571	0.54	| Q V	|	|	|	|
5+45	0.1610	0.56	| Q V	|	|	|	|
5+50	0.1649	0.58	| Q V	|	|	|	|
5+55	0.1690	0.58	| Q V	|	|	|	|
6+ 0	0.1730	0.59	| Q V	|	|	|	|

6+ 5	0.1771	0.60	Q V				
6+10	0.1813	0.61	Q V				
6+15	0.1857	0.63	Q V				
6+20	0.1901	0.65	Q V				
6+25	0.1946	0.66	Q V				
6+30	0.1992	0.66	Q V				
6+35	0.2038	0.67	Q V				
6+40	0.2085	0.68	Q V				
6+45	0.2133	0.70	Q V				
6+50	0.2183	0.72	Q V				
6+55	0.2233	0.73	Q V				
7+ 0	0.2284	0.74	Q V				
7+ 5	0.2335	0.74	Q V				
7+10	0.2386	0.74	Q V				
7+15	0.2438	0.75	Q V				
7+20	0.2490	0.75	Q V				
7+25	0.2542	0.77	Q V				
7+30	0.2596	0.79	Q V				
7+35	0.2652	0.80	Q V				
7+40	0.2709	0.82	Q V				
7+45	0.2767	0.85	Q V				
7+50	0.2827	0.87	Q V				
7+55	0.2888	0.89	Q V				
8+ 0	0.2951	0.92	Q V				
8+ 5	0.3016	0.94	Q V				
8+10	0.3084	0.98	Q V				
8+15	0.3154	1.02	Q V				
8+20	0.3227	1.06	Q V				
8+25	0.3301	1.08	Q V				
8+30	0.3376	1.09	Q V				
8+35	0.3451	1.10	Q V				
8+40	0.3529	1.12	Q V				
8+45	0.3607	1.14	Q V				
8+50	0.3688	1.17	Q V				
8+55	0.3770	1.19	Q V				
9+ 0	0.3853	1.22	Q V				
9+ 5	0.3939	1.24	Q V				
9+10	0.4027	1.28	Q V				
9+15	0.4118	1.32	Q V				
9+20	0.4212	1.36	Q V				
9+25	0.4308	1.39	Q V				
9+30	0.4406	1.42	Q V				
9+35	0.4506	1.45	Q V				
9+40	0.4608	1.48	Q V				
9+45	0.4712	1.51	Q V				
9+50	0.4817	1.53	Q V				
9+55	0.4925	1.56	Q V				
10+ 0	0.5034	1.59	Q V				
10+ 5	0.5144	1.59	Q V				
10+10	0.5249	1.53	Q V				
10+15	0.5345	1.41	Q V				
10+20	0.5436	1.31	Q V				
10+25	0.5523	1.26	Q V				
10+30	0.5608	1.24	Q V				
10+35	0.5693	1.23	Q V				
10+40	0.5781	1.28	Q V				
10+45	0.5875	1.36	Q V				
10+50	0.5972	1.42	Q V				
10+55	0.6072	1.45	Q V				
11+ 0	0.6173	1.47	Q V				
11+ 5	0.6275	1.48	Q V				
11+10	0.6376	1.47	Q V				
11+15	0.6477	1.46	Q V				



11+20	0.6577	1.45	Q	V			
11+25	0.6676	1.45	Q	V			
11+30	0.6776	1.44	Q	V			
11+35	0.6875	1.44	Q	V			
11+40	0.6972	1.41	Q	V			
11+45	0.7067	1.38	Q	V			
11+50	0.7160	1.35	Q	V			
11+55	0.7253	1.35	Q	V			
12+ 0	0.7346	1.36	Q	V			
12+ 5	0.7442	1.39	Q	V			
12+10	0.7543	1.47	Q	V			
12+15	0.7653	1.60	Q	V			
12+20	0.7770	1.70	Q	V			
12+25	0.7892	1.77	Q	V			
12+30	0.8017	1.82	Q	V			
12+35	0.8145	1.86	Q	V			
12+40	0.8276	1.91	Q	V			
12+45	0.8411	1.96	Q	V			
12+50	0.8549	2.01	Q	V			
12+55	0.8690	2.04	Q	V			
13+ 0	0.8833	2.08	Q	V			
13+ 5	0.8979	2.12	Q	V			
13+10	0.9131	2.20	Q	V			
13+15	0.9289	2.30	Q	V			
13+20	0.9454	2.39	Q	V			
13+25	0.9622	2.44	Q	V			
13+30	0.9791	2.47	Q	V			
13+35	0.9961	2.46	Q	V			
13+40	1.0123	2.35	Q	V			
13+45	1.0272	2.17	Q	V			
13+50	1.0411	2.02	Q	V			
13+55	1.0545	1.94	Q	V			
14+ 0	1.0676	1.90	Q	V			
14+ 5	1.0806	1.88	Q	V			
14+10	1.0937	1.91	Q	V			
14+15	1.1072	1.96	Q	V			
14+20	1.1210	2.00	Q	V			
14+25	1.1349	2.01	Q	V			
14+30	1.1487	2.00	Q	V			
14+35	1.1624	1.99	Q	V			
14+40	1.1761	1.99	Q	V			
14+45	1.1898	1.98	Q	V			
14+50	1.2034	1.98	Q	V			
14+55	1.2170	1.97	Q	V			
15+ 0	1.2304	1.95	Q	V			
15+ 5	1.2436	1.93	Q	V			
15+10	1.2568	1.91	Q	V			
15+15	1.2698	1.88	Q	V			
15+20	1.2826	1.86	Q	V			
15+25	1.2952	1.84	Q	V			
15+30	1.3078	1.82	Q	V			
15+35	1.3200	1.79	Q	V			
15+40	1.3320	1.73	Q	V			
15+45	1.3433	1.65	Q	V			
15+50	1.3542	1.59	Q	V			
15+55	1.3649	1.55	Q	V			
16+ 0	1.3755	1.53	Q	V			
16+ 5	1.3856	1.47	Q	V			
16+10	1.3945	1.29	Q	V			
16+15	1.4014	1.01	Q	V			
16+20	1.4068	0.78	Q	V			
16+25	1.4113	0.66	Q	V			
16+30	1.4153	0.59	Q	V			

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16+35       1.4190      0.53  | Q       |         |         |     V   |
16+40       1.4223      0.48  |Q        |         |         |     V   |
16+45       1.4252      0.42  |Q        |         |         |     V   |
16+50       1.4278      0.38  |Q        |         |         |     V   |
16+55       1.4302      0.35  |Q        |         |         |     V   |
17+ 0       1.4325      0.33  |Q        |         |         |     V   |
17+ 5       1.4347      0.32  |Q        |         |         |     V   |
17+10       1.4369      0.32  |Q        |         |         |     V   |
17+15       1.4393      0.35  |Q        |         |         |     V   |
17+20       1.4418      0.36  |Q        |         |         |     V   |
17+25       1.4443      0.37  |Q        |         |         |     V   |
17+30       1.4469      0.37  |Q        |         |         |     V   |
17+35       1.4495      0.37  |Q        |         |         |     V   |
17+40       1.4520      0.37  |Q        |         |         |     V   |
17+45       1.4546      0.37  |Q        |         |         |      V  |
17+50       1.4571      0.37  |Q        |         |         |      V  |
17+55       1.4596      0.36  |Q        |         |         |      V  |
18+ 0       1.4619      0.34  |Q        |         |         |      V  |
18+ 5       1.4641      0.33  |Q        |         |         |      V  |
18+10       1.4663      0.32  |Q        |         |         |      V  |
18+15       1.4685      0.32  |Q        |         |         |      V  |
18+20       1.4707      0.31  |Q        |         |         |      V  |
18+25       1.4728      0.31  |Q        |         |         |      V  |
18+30       1.4750      0.31  |Q        |         |         |      V  |
18+35       1.4771      0.31  |Q        |         |         |      V  |
18+40       1.4791      0.29  |Q        |         |         |      V  |
18+45       1.4810      0.28  |Q        |         |         |      V  |
18+50       1.4828      0.26  |Q        |         |         |      V  |
18+55       1.4844      0.24  Q         |         |         |      V  |
19+ 0       1.4859      0.22  Q         |         |         |      V  |
19+ 5       1.4873      0.20  Q         |         |         |      V  |
19+10       1.4887      0.20  Q         |         |         |      V  |
19+15       1.4901      0.21  Q         |         |         |      V  |
19+20       1.4917      0.22  Q         |         |         |      V  |
19+25       1.4933      0.24  Q         |         |         |       V |
19+30       1.4951      0.26  |Q        |         |         |       V |
19+35       1.4970      0.27  |Q        |         |         |       V |
19+40       1.4988      0.27  |Q        |         |         |       V |
19+45       1.5005      0.25  |Q        |         |         |       V |
19+50       1.5022      0.24  Q         |         |         |       V |
19+55       1.5037      0.22  Q         |         |         |       V |
20+ 0       1.5051      0.20  Q         |         |         |       V |
20+ 5       1.5064      0.19  Q         |         |         |       V |
20+10       1.5077      0.19  Q         |         |         |       V |
20+15       1.5092      0.20  Q         |         |         |       V |
20+20       1.5106      0.22  Q         |         |         |       V |
20+25       1.5121      0.22  Q         |         |         |       V |
20+30       1.5137      0.22  Q         |         |         |       V |
20+35       1.5152      0.22  Q         |         |         |       V |
20+40       1.5168      0.22  Q         |         |         |       V |
20+45       1.5183      0.22  Q         |         |         |       V |
20+50       1.5198      0.22  Q         |         |         |       V |
20+55       1.5213      0.21  Q         |         |         |       V |
21+ 0       1.5226      0.19  Q         |         |         |       V |
21+ 5       1.5239      0.18  Q         |         |         |       V |
21+10       1.5252      0.19  Q         |         |         |       V |
21+15       1.5266      0.20  Q         |         |         |       V |
21+20       1.5280      0.21  Q         |         |         |       V |
21+25       1.5294      0.20  Q         |         |         |       V |
21+30       1.5307      0.19  Q         |         |         |       V |
21+35       1.5319      0.18  Q         |         |         |        V|
21+40       1.5332      0.18  Q         |         |         |        V|
21+45       1.5345      0.20  Q         |         |         |        V|
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  21+50       1.5359      0.21  Q         |         |         |         V|
  21+55       1.5373      0.20  Q         |         |         |         V|
  22+ 0       1.5386      0.19  Q         |         |         |         V|
  22+ 5       1.5398      0.18  Q         |         |         |         V|
  22+10       1.5410      0.18  Q         |         |         |         V|
  22+15       1.5424      0.20  Q         |         |         |         V|
  22+20       1.5438      0.21  Q         |         |         |         V|
  22+25       1.5452      0.20  Q         |         |         |         V|
  22+30       1.5465      0.18  Q         |         |         |         V|
  22+35       1.5476      0.17  Q         |         |         |         V|
  22+40       1.5488      0.17  Q         |         |         |         V|
  22+45       1.5499      0.16  Q         |         |         |         V|
  22+50       1.5510      0.16  Q         |         |         |         V|
  22+55       1.5521      0.16  Q         |         |         |         V|
  23+ 0       1.5532      0.16  Q         |         |         |         V|
  23+ 5       1.5543      0.16  Q         |         |         |         V|
  23+10       1.5554      0.16  Q         |         |         |         V|
  23+15       1.5564      0.16  Q         |         |         |         V|
  23+20       1.5575      0.15  Q         |         |         |         V|
  23+25       1.5586      0.15  Q         |         |         |         V|
  23+30       1.5596      0.15  Q         |         |         |         V|
  23+35       1.5607      0.15  Q         |         |         |         V|
  23+40       1.5617      0.15  Q         |         |         |         V|
  23+45       1.5628      0.15  Q         |         |         |         V|
  23+50       1.5638      0.15  Q         |         |         |         V|
  23+55       1.5649      0.15  Q         |         |         |         V|
  24+ 0       1.5659      0.15  Q         |         |         |         V|
  24+ 5       1.5669      0.15  Q         |         |         |         V|
  24+10       1.5678      0.12  Q         |         |         |         V|
  24+15       1.5684      0.09  Q         |         |         |         V|
  24+20       1.5688      0.06  Q         |         |         |         V|
  24+25       1.5691      0.04  Q         |         |         |         V|
  24+30       1.5693      0.03  Q         |         |         |         V|
  24+35       1.5695      0.03  Q         |         |         |         V|
  24+40       1.5697      0.02  Q         |         |         |         V|
  24+45       1.5698      0.02  Q         |         |         |         V|
  24+50       1.5699      0.02  Q         |         |         |         V|
  24+55       1.5700      0.01  Q         |         |         |         V|
  25+ 0       1.5701      0.01  Q         |         |         |         V|
  25+ 5       1.5701      0.01  Q         |         |         |         V|
  25+10       1.5702      0.01  Q         |         |         |         V|
  25+15       1.5702      0.01  Q         |         |         |         V|
  25+20       1.5703      0.00  Q         |         |         |         V|
  25+25       1.5703      0.00  Q         |         |         |         V|
  25+30       1.5703      0.00  Q         |         |         |         V|
  25+35       1.5703      0.00  Q         |         |         |         V|
  25+40       1.5703      0.00  Q         |         |         |         V|
  25+45       1.5703      0.00  Q         |         |         |         V|
  25+50       1.5703      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

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Study date 07/10/25 File: xa2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 "TRES CERRITOS" PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
EXISTING AREA "XA" (WEST)
10-YEAR
24-HOUR

Drainage Area = 104.71(Ac.) = 0.164 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 104.71(Ac.) = 0.164 Sq. Mi.
Length along longest watercourse = 6713.00(Ft.)
Length along longest watercourse measured to centroid = 4064.00(Ft.)
Length along longest watercourse = 1.271 Mi.
Length along longest watercourse measured to centroid = 0.770 Mi.
Difference in elevation = 473.30(Ft.)
Slope along watercourse = 372.2663 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.232 Hr.
Lag time = 13.91 Min.
25% of lag time = 3.48 Min.
40% of lag time = 5.57 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
104.71	1.80	188.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
104.71	4.50	471.19

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 2.910(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
104.710	78.70	0.000

Total Area Entered = 104.71(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.7	78.7	0.259	0.000	0.259	1.000	0.259
					Sum (F) =	0.259

Area averaged mean soil loss (F) (In/Hr) = 0.259
Minimum soil loss rate ((In/Hr)) = 0.130
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	35.935	3.722	3.928
2	0.167	71.870	14.771	15.587
3	0.250	107.805	24.030	25.358
4	0.333	143.741	19.261	20.326
5	0.417	179.676	9.985	10.537
6	0.500	215.611	5.788	6.108
7	0.583	251.546	4.277	4.513
8	0.667	287.481	3.350	3.535
9	0.750	323.416	2.618	2.763
10	0.833	359.352	2.163	2.282
11	0.917	395.287	1.738	1.835
12	1.000	431.222	1.418	1.497
13	1.083	467.157	1.145	1.209
14	1.167	503.092	1.087	1.147
15	1.250	539.027	0.911	0.961
16	1.333	574.962	0.756	0.798
17	1.417	610.898	0.647	0.683
18	1.500	646.833	0.538	0.568
19	1.583	682.768	0.443	0.468
20	1.667	718.703	0.360	0.380
21	1.750	754.638	0.359	0.379
22	1.833	790.573	0.359	0.379
23	1.917	826.509	0.274	0.289
			Sum = 100.000	Sum= 105.528

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.460)	0.021	0.002
2	0.17	0.07	0.023	(0.458)	0.021	0.002
3	0.25	0.07	0.023	(0.456)	0.021	0.002

4	0.33	0.10	0.035	(0.454)	0.031	0.003
5	0.42	0.10	0.035	(0.453)	0.031	0.003
6	0.50	0.10	0.035	(0.451)	0.031	0.003
7	0.58	0.10	0.035	(0.449)	0.031	0.003
8	0.67	0.10	0.035	(0.447)	0.031	0.003
9	0.75	0.10	0.035	(0.446)	0.031	0.003
10	0.83	0.13	0.047	(0.444)	0.042	0.005
11	0.92	0.13	0.047	(0.442)	0.042	0.005
12	1.00	0.13	0.047	(0.440)	0.042	0.005
13	1.08	0.10	0.035	(0.439)	0.031	0.003
14	1.17	0.10	0.035	(0.437)	0.031	0.003
15	1.25	0.10	0.035	(0.435)	0.031	0.003
16	1.33	0.10	0.035	(0.433)	0.031	0.003
17	1.42	0.10	0.035	(0.432)	0.031	0.003
18	1.50	0.10	0.035	(0.430)	0.031	0.003
19	1.58	0.10	0.035	(0.428)	0.031	0.003
20	1.67	0.10	0.035	(0.427)	0.031	0.003
21	1.75	0.10	0.035	(0.425)	0.031	0.003
22	1.83	0.13	0.047	(0.423)	0.042	0.005
23	1.92	0.13	0.047	(0.421)	0.042	0.005
24	2.00	0.13	0.047	(0.420)	0.042	0.005
25	2.08	0.13	0.047	(0.418)	0.042	0.005
26	2.17	0.13	0.047	(0.416)	0.042	0.005
27	2.25	0.13	0.047	(0.415)	0.042	0.005
28	2.33	0.13	0.047	(0.413)	0.042	0.005
29	2.42	0.13	0.047	(0.411)	0.042	0.005
30	2.50	0.13	0.047	(0.410)	0.042	0.005
31	2.58	0.17	0.058	(0.408)	0.052	0.006
32	2.67	0.17	0.058	(0.406)	0.052	0.006
33	2.75	0.17	0.058	(0.405)	0.052	0.006
34	2.83	0.17	0.058	(0.403)	0.052	0.006
35	2.92	0.17	0.058	(0.401)	0.052	0.006
36	3.00	0.17	0.058	(0.400)	0.052	0.006
37	3.08	0.17	0.058	(0.398)	0.052	0.006
38	3.17	0.17	0.058	(0.396)	0.052	0.006
39	3.25	0.17	0.058	(0.395)	0.052	0.006
40	3.33	0.17	0.058	(0.393)	0.052	0.006
41	3.42	0.17	0.058	(0.391)	0.052	0.006
42	3.50	0.17	0.058	(0.390)	0.052	0.006
43	3.58	0.17	0.058	(0.388)	0.052	0.006
44	3.67	0.17	0.058	(0.386)	0.052	0.006
45	3.75	0.17	0.058	(0.385)	0.052	0.006
46	3.83	0.20	0.070	(0.383)	0.063	0.007
47	3.92	0.20	0.070	(0.382)	0.063	0.007
48	4.00	0.20	0.070	(0.380)	0.063	0.007
49	4.08	0.20	0.070	(0.378)	0.063	0.007
50	4.17	0.20	0.070	(0.377)	0.063	0.007
51	4.25	0.20	0.070	(0.375)	0.063	0.007
52	4.33	0.23	0.081	(0.374)	0.073	0.008
53	4.42	0.23	0.081	(0.372)	0.073	0.008
54	4.50	0.23	0.081	(0.370)	0.073	0.008
55	4.58	0.23	0.081	(0.369)	0.073	0.008
56	4.67	0.23	0.081	(0.367)	0.073	0.008
57	4.75	0.23	0.081	(0.366)	0.073	0.008
58	4.83	0.27	0.093	(0.364)	0.084	0.009
59	4.92	0.27	0.093	(0.362)	0.084	0.009
60	5.00	0.27	0.093	(0.361)	0.084	0.009
61	5.08	0.20	0.070	(0.359)	0.063	0.007
62	5.17	0.20	0.070	(0.358)	0.063	0.007
63	5.25	0.20	0.070	(0.356)	0.063	0.007
64	5.33	0.23	0.081	(0.355)	0.073	0.008
65	5.42	0.23	0.081	(0.353)	0.073	0.008
66	5.50	0.23	0.081	(0.352)	0.073	0.008

67	5.58	0.27	0.093	(0.350)	0.084	0.009
68	5.67	0.27	0.093	(0.348)	0.084	0.009
69	5.75	0.27	0.093	(0.347)	0.084	0.009
70	5.83	0.27	0.093	(0.345)	0.084	0.009
71	5.92	0.27	0.093	(0.344)	0.084	0.009
72	6.00	0.27	0.093	(0.342)	0.084	0.009
73	6.08	0.30	0.105	(0.341)	0.094	0.010
74	6.17	0.30	0.105	(0.339)	0.094	0.010
75	6.25	0.30	0.105	(0.338)	0.094	0.010
76	6.33	0.30	0.105	(0.336)	0.094	0.010
77	6.42	0.30	0.105	(0.335)	0.094	0.010
78	6.50	0.30	0.105	(0.333)	0.094	0.010
79	6.58	0.33	0.116	(0.332)	0.105	0.012
80	6.67	0.33	0.116	(0.330)	0.105	0.012
81	6.75	0.33	0.116	(0.329)	0.105	0.012
82	6.83	0.33	0.116	(0.327)	0.105	0.012
83	6.92	0.33	0.116	(0.326)	0.105	0.012
84	7.00	0.33	0.116	(0.324)	0.105	0.012
85	7.08	0.33	0.116	(0.323)	0.105	0.012
86	7.17	0.33	0.116	(0.321)	0.105	0.012
87	7.25	0.33	0.116	(0.320)	0.105	0.012
88	7.33	0.37	0.128	(0.318)	0.115	0.013
89	7.42	0.37	0.128	(0.317)	0.115	0.013
90	7.50	0.37	0.128	(0.316)	0.115	0.013
91	7.58	0.40	0.140	(0.314)	0.126	0.014
92	7.67	0.40	0.140	(0.313)	0.126	0.014
93	7.75	0.40	0.140	(0.311)	0.126	0.014
94	7.83	0.43	0.151	(0.310)	0.136	0.015
95	7.92	0.43	0.151	(0.308)	0.136	0.015
96	8.00	0.43	0.151	(0.307)	0.136	0.015
97	8.08	0.50	0.175	(0.305)	0.157	0.017
98	8.17	0.50	0.175	(0.304)	0.157	0.017
99	8.25	0.50	0.175	(0.303)	0.157	0.017
100	8.33	0.50	0.175	(0.301)	0.157	0.017
101	8.42	0.50	0.175	(0.300)	0.157	0.017
102	8.50	0.50	0.175	(0.298)	0.157	0.017
103	8.58	0.53	0.186	(0.297)	0.168	0.019
104	8.67	0.53	0.186	(0.296)	0.168	0.019
105	8.75	0.53	0.186	(0.294)	0.168	0.019
106	8.83	0.57	0.198	(0.293)	0.178	0.020
107	8.92	0.57	0.198	(0.291)	0.178	0.020
108	9.00	0.57	0.198	(0.290)	0.178	0.020
109	9.08	0.63	0.221	(0.289)	0.199	0.022
110	9.17	0.63	0.221	(0.287)	0.199	0.022
111	9.25	0.63	0.221	(0.286)	0.199	0.022
112	9.33	0.67	0.233	(0.285)	0.210	0.023
113	9.42	0.67	0.233	(0.283)	0.210	0.023
114	9.50	0.67	0.233	(0.282)	0.210	0.023
115	9.58	0.70	0.244	(0.281)	0.220	0.024
116	9.67	0.70	0.244	(0.279)	0.220	0.024
117	9.75	0.70	0.244	(0.278)	0.220	0.024
118	9.83	0.73	0.256	(0.277)	0.230	0.026
119	9.92	0.73	0.256	(0.275)	0.230	0.026
120	10.00	0.73	0.256	(0.274)	0.230	0.026
121	10.08	0.50	0.175	(0.273)	0.157	0.017
122	10.17	0.50	0.175	(0.271)	0.157	0.017
123	10.25	0.50	0.175	(0.270)	0.157	0.017
124	10.33	0.50	0.175	(0.269)	0.157	0.017
125	10.42	0.50	0.175	(0.267)	0.157	0.017
126	10.50	0.50	0.175	(0.266)	0.157	0.017
127	10.58	0.67	0.233	(0.265)	0.210	0.023
128	10.67	0.67	0.233	(0.263)	0.210	0.023
129	10.75	0.67	0.233	(0.262)	0.210	0.023

130	10.83	0.67	0.233	(	0.261)	0.210	0.023
131	10.92	0.67	0.233	(	0.260)	0.210	0.023
132	11.00	0.67	0.233	(	0.258)	0.210	0.023
133	11.08	0.63	0.221	(	0.257)	0.199	0.022
134	11.17	0.63	0.221	(	0.256)	0.199	0.022
135	11.25	0.63	0.221	(	0.254)	0.199	0.022
136	11.33	0.63	0.221	(	0.253)	0.199	0.022
137	11.42	0.63	0.221	(	0.252)	0.199	0.022
138	11.50	0.63	0.221	(	0.251)	0.199	0.022
139	11.58	0.57	0.198	(	0.249)	0.178	0.020
140	11.67	0.57	0.198	(	0.248)	0.178	0.020
141	11.75	0.57	0.198	(	0.247)	0.178	0.020
142	11.83	0.60	0.210	(	0.246)	0.189	0.021
143	11.92	0.60	0.210	(	0.245)	0.189	0.021
144	12.00	0.60	0.210	(	0.243)	0.189	0.021
145	12.08	0.83	0.291		0.242	(0.262)	0.049
146	12.17	0.83	0.291		0.241	(0.262)	0.050
147	12.25	0.83	0.291		0.240	(0.262)	0.051
148	12.33	0.87	0.303		0.238	(0.272)	0.064
149	12.42	0.87	0.303		0.237	(0.272)	0.065
150	12.50	0.87	0.303		0.236	(0.272)	0.067
151	12.58	0.93	0.326		0.235	(0.293)	0.091
152	12.67	0.93	0.326		0.234	(0.293)	0.092
153	12.75	0.93	0.326		0.233	(0.293)	0.093
154	12.83	0.97	0.338		0.231	(0.304)	0.106
155	12.92	0.97	0.338		0.230	(0.304)	0.107
156	13.00	0.97	0.338		0.229	(0.304)	0.109
157	13.08	1.13	0.396		0.228	(0.356)	0.168
158	13.17	1.13	0.396		0.227	(0.356)	0.169
159	13.25	1.13	0.396		0.226	(0.356)	0.170
160	13.33	1.13	0.396		0.224	(0.356)	0.171
161	13.42	1.13	0.396		0.223	(0.356)	0.173
162	13.50	1.13	0.396		0.222	(0.356)	0.174
163	13.58	0.77	0.268		0.221	(0.241)	0.047
164	13.67	0.77	0.268		0.220	(0.241)	0.048
165	13.75	0.77	0.268		0.219	(0.241)	0.049
166	13.83	0.77	0.268		0.218	(0.241)	0.050
167	13.92	0.77	0.268		0.217	(0.241)	0.051
168	14.00	0.77	0.268		0.215	(0.241)	0.052
169	14.08	0.90	0.314		0.214	(0.283)	0.100
170	14.17	0.90	0.314		0.213	(0.283)	0.101
171	14.25	0.90	0.314		0.212	(0.283)	0.102
172	14.33	0.87	0.303		0.211	(0.272)	0.092
173	14.42	0.87	0.303		0.210	(0.272)	0.093
174	14.50	0.87	0.303		0.209	(0.272)	0.094
175	14.58	0.87	0.303		0.208	(0.272)	0.095
176	14.67	0.87	0.303		0.207	(0.272)	0.096
177	14.75	0.87	0.303		0.206	(0.272)	0.097
178	14.83	0.83	0.291		0.205	(0.262)	0.086
179	14.92	0.83	0.291		0.204	(0.262)	0.087
180	15.00	0.83	0.291		0.203	(0.262)	0.088
181	15.08	0.80	0.279		0.202	(0.251)	0.078
182	15.17	0.80	0.279		0.200	(0.251)	0.079
183	15.25	0.80	0.279		0.199	(0.251)	0.080
184	15.33	0.77	0.268		0.198	(0.241)	0.069
185	15.42	0.77	0.268		0.197	(0.241)	0.070
186	15.50	0.77	0.268		0.196	(0.241)	0.071
187	15.58	0.63	0.221		0.195	(0.199)	0.026
188	15.67	0.63	0.221		0.194	(0.199)	0.027
189	15.75	0.63	0.221		0.193	(0.199)	0.028
190	15.83	0.63	0.221		0.192	(0.199)	0.029
191	15.92	0.63	0.221		0.191	(0.199)	0.030
192	16.00	0.63	0.221		0.190	(0.199)	0.031

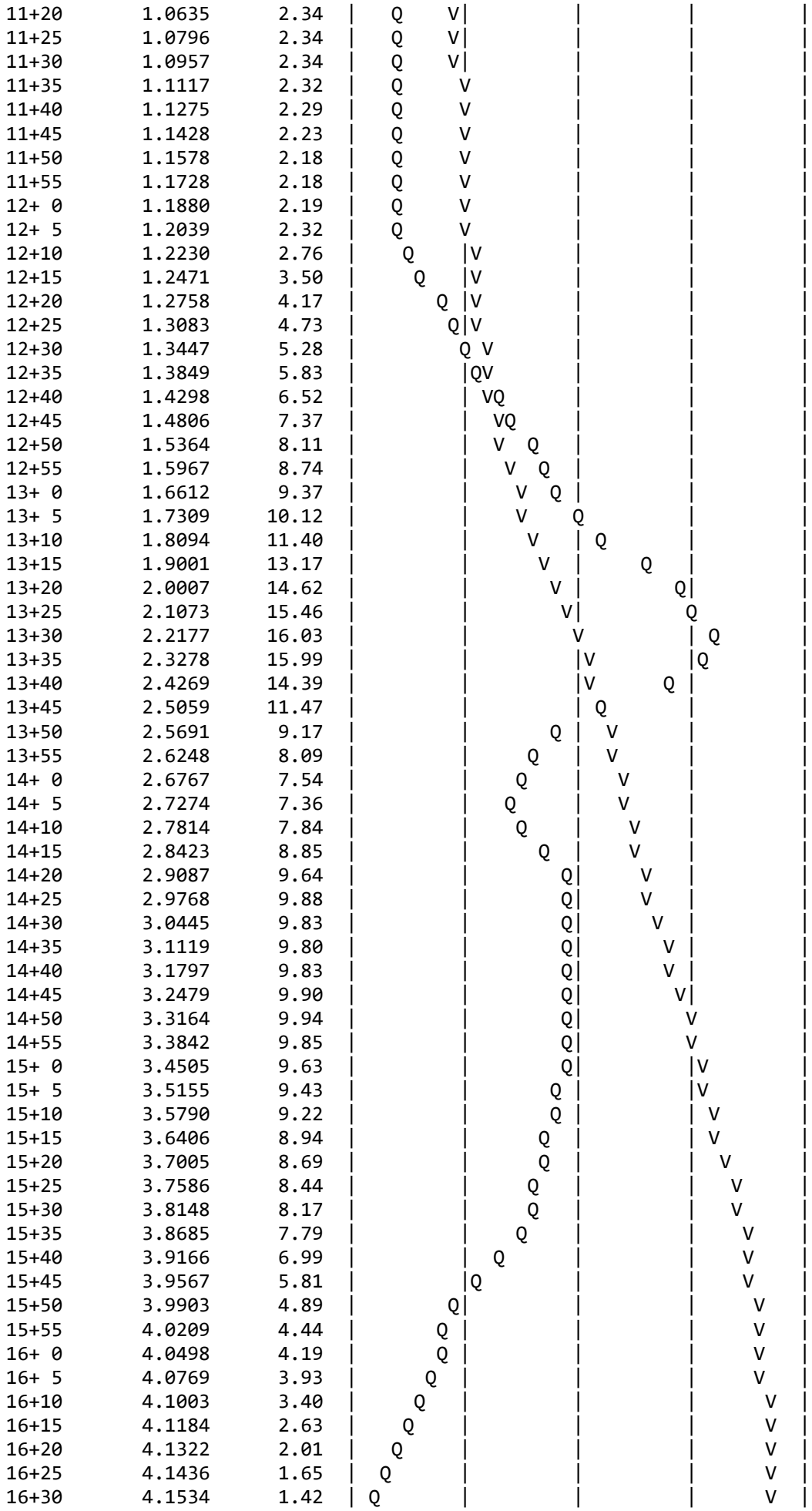
193	16.08	0.13	0.047	(	0.189)	0.042	0.005
194	16.17	0.13	0.047	(	0.189)	0.042	0.005
195	16.25	0.13	0.047	(	0.188)	0.042	0.005
196	16.33	0.13	0.047	(	0.187)	0.042	0.005
197	16.42	0.13	0.047	(	0.186)	0.042	0.005
198	16.50	0.13	0.047	(	0.185)	0.042	0.005
199	16.58	0.10	0.035	(	0.184)	0.031	0.003
200	16.67	0.10	0.035	(	0.183)	0.031	0.003
201	16.75	0.10	0.035	(	0.182)	0.031	0.003
202	16.83	0.10	0.035	(	0.181)	0.031	0.003
203	16.92	0.10	0.035	(	0.180)	0.031	0.003
204	17.00	0.10	0.035	(	0.179)	0.031	0.003
205	17.08	0.17	0.058	(	0.178)	0.052	0.006
206	17.17	0.17	0.058	(	0.177)	0.052	0.006
207	17.25	0.17	0.058	(	0.176)	0.052	0.006
208	17.33	0.17	0.058	(	0.176)	0.052	0.006
209	17.42	0.17	0.058	(	0.175)	0.052	0.006
210	17.50	0.17	0.058	(	0.174)	0.052	0.006
211	17.58	0.17	0.058	(	0.173)	0.052	0.006
212	17.67	0.17	0.058	(	0.172)	0.052	0.006
213	17.75	0.17	0.058	(	0.171)	0.052	0.006
214	17.83	0.13	0.047	(	0.170)	0.042	0.005
215	17.92	0.13	0.047	(	0.170)	0.042	0.005
216	18.00	0.13	0.047	(	0.169)	0.042	0.005
217	18.08	0.13	0.047	(	0.168)	0.042	0.005
218	18.17	0.13	0.047	(	0.167)	0.042	0.005
219	18.25	0.13	0.047	(	0.166)	0.042	0.005
220	18.33	0.13	0.047	(	0.165)	0.042	0.005
221	18.42	0.13	0.047	(	0.165)	0.042	0.005
222	18.50	0.13	0.047	(	0.164)	0.042	0.005
223	18.58	0.10	0.035	(	0.163)	0.031	0.003
224	18.67	0.10	0.035	(	0.162)	0.031	0.003
225	18.75	0.10	0.035	(	0.161)	0.031	0.003
226	18.83	0.07	0.023	(	0.161)	0.021	0.002
227	18.92	0.07	0.023	(	0.160)	0.021	0.002
228	19.00	0.07	0.023	(	0.159)	0.021	0.002
229	19.08	0.10	0.035	(	0.158)	0.031	0.003
230	19.17	0.10	0.035	(	0.158)	0.031	0.003
231	19.25	0.10	0.035	(	0.157)	0.031	0.003
232	19.33	0.13	0.047	(	0.156)	0.042	0.005
233	19.42	0.13	0.047	(	0.155)	0.042	0.005
234	19.50	0.13	0.047	(	0.155)	0.042	0.005
235	19.58	0.10	0.035	(	0.154)	0.031	0.003
236	19.67	0.10	0.035	(	0.153)	0.031	0.003
237	19.75	0.10	0.035	(	0.153)	0.031	0.003
238	19.83	0.07	0.023	(	0.152)	0.021	0.002
239	19.92	0.07	0.023	(	0.151)	0.021	0.002
240	20.00	0.07	0.023	(	0.151)	0.021	0.002
241	20.08	0.10	0.035	(	0.150)	0.031	0.003
242	20.17	0.10	0.035	(	0.149)	0.031	0.003
243	20.25	0.10	0.035	(	0.149)	0.031	0.003
244	20.33	0.10	0.035	(	0.148)	0.031	0.003
245	20.42	0.10	0.035	(	0.147)	0.031	0.003
246	20.50	0.10	0.035	(	0.147)	0.031	0.003
247	20.58	0.10	0.035	(	0.146)	0.031	0.003
248	20.67	0.10	0.035	(	0.145)	0.031	0.003
249	20.75	0.10	0.035	(	0.145)	0.031	0.003
250	20.83	0.07	0.023	(	0.144)	0.021	0.002
251	20.92	0.07	0.023	(	0.144)	0.021	0.002
252	21.00	0.07	0.023	(	0.143)	0.021	0.002
253	21.08	0.10	0.035	(	0.143)	0.031	0.003
254	21.17	0.10	0.035	(	0.142)	0.031	0.003
255	21.25	0.10	0.035	(	0.141)	0.031	0.003

```
256  21.33     0.07      0.023       (  0.141)       0.021        0.002
257  21.42     0.07      0.023       (  0.140)       0.021        0.002
258  21.50     0.07      0.023       (  0.140)       0.021        0.002
259  21.58     0.10      0.035       (  0.139)       0.031        0.003
260  21.67     0.10      0.035       (  0.139)       0.031        0.003
261  21.75     0.10      0.035       (  0.138)       0.031        0.003
262  21.83     0.07      0.023       (  0.138)       0.021        0.002
263  21.92     0.07      0.023       (  0.137)       0.021        0.002
264  22.00     0.07      0.023       (  0.137)       0.021        0.002
265  22.08     0.10      0.035       (  0.136)       0.031        0.003
266  22.17     0.10      0.035       (  0.136)       0.031        0.003
267  22.25     0.10      0.035       (  0.136)       0.031        0.003
268  22.33     0.07      0.023       (  0.135)       0.021        0.002
269  22.42     0.07      0.023       (  0.135)       0.021        0.002
270  22.50     0.07      0.023       (  0.134)       0.021        0.002
271  22.58     0.07      0.023       (  0.134)       0.021        0.002
272  22.67     0.07      0.023       (  0.134)       0.021        0.002
273  22.75     0.07      0.023       (  0.133)       0.021        0.002
274  22.83     0.07      0.023       (  0.133)       0.021        0.002
275  22.92     0.07      0.023       (  0.133)       0.021        0.002
276  23.00     0.07      0.023       (  0.132)       0.021        0.002
277  23.08     0.07      0.023       (  0.132)       0.021        0.002
278  23.17     0.07      0.023       (  0.132)       0.021        0.002
279  23.25     0.07      0.023       (  0.131)       0.021        0.002
280  23.33     0.07      0.023       (  0.131)       0.021        0.002
281  23.42     0.07      0.023       (  0.131)       0.021        0.002
282  23.50     0.07      0.023       (  0.131)       0.021        0.002
283  23.58     0.07      0.023       (  0.130)       0.021        0.002
284  23.67     0.07      0.023       (  0.130)       0.021        0.002
285  23.75     0.07      0.023       (  0.130)       0.021        0.002
286  23.83     0.07      0.023       (  0.130)       0.021        0.002
287  23.92     0.07      0.023       (  0.130)       0.021        0.002
288  24.00     0.07      0.023       (  0.130)       0.021        0.002
                (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     6.1
       Flood volume = Effective rainfall      0.51(In)
        times area     104.7(Ac.)/[(In)/(Ft.)] =       4.4(Ac.Ft)
       Total soil loss =      2.40(In)
       Total soil loss =    20.978(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =      192360.6 Cubic Feet
       Total soil loss =      913801.0 Cubic Feet
       ------------------------------------------------------------------
        Peak flow rate of this hydrograph =     16.034(CFS)
       ------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0      20.0
 ------------------------------------------------------------------------
   0+ 5       0.0001      0.01  Q         |         |         |         |
   0+10       0.0004      0.05  Q         |         |         |         |
   0+15       0.0011      0.10  Q         |         |         |         |
   0+20       0.0022      0.16  Q         |         |         |         |
   0+25       0.0035      0.20  Q         |         |         |         |
   0+30       0.0052      0.24  Q         |         |         |         |
   0+35       0.0071      0.28  Q         |         |         |         |
   0+40       0.0092      0.30  Q         |         |         |         |
   0+45       0.0113      0.31  Q         |         |         |         |
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0+50	0.0136	0.33	Q	|	|	|	|
0+55	0.0160	0.35	Q	|	|	|	|
1+ 0	0.0187	0.39	Q	|	|	|	|
1+ 5	0.0215	0.41	Q	|	|	|	|
1+10	0.0244	0.41	Q	|	|	|	|
1+15	0.0271	0.39	Q	|	|	|	|
1+20	0.0297	0.38	Q	|	|	|	|
1+25	0.0323	0.37	Q	|	|	|	|
1+30	0.0348	0.37	Q	|	|	|	|
1+35	0.0374	0.37	Q	|	|	|	|
1+40	0.0399	0.37	Q	|	|	|	|
1+45	0.0425	0.37	Q	|	|	|	|
1+50	0.0451	0.38	Q	|	|	|	|
1+55	0.0478	0.39	Q	|	|	|	|
2+ 0	0.0507	0.42	Q	|	|	|	|
2+ 5	0.0538	0.45	Q	|	|	|	|
2+10	0.0570	0.46	Q	|	|	|	|
2+15	0.0602	0.47	Q	|	|	|	|
2+20	0.0634	0.47	Q	|	|	|	|
2+25	0.0667	0.48	Q	|	|	|	|
2+30	0.0700	0.48	Q	|	|	|	|
2+35	0.0733	0.49	Q	|	|	|	|
2+40	0.0768	0.51	VQ	|	|	|	|
2+45	0.0805	0.54	VQ	|	|	|	|
2+50	0.0844	0.56	VQ	|	|	|	|
2+55	0.0883	0.57	VQ	|	|	|	|
3+ 0	0.0924	0.58	VQ	|	|	|	|
3+ 5	0.0964	0.59	VQ	|	|	|	|
3+10	0.1005	0.59	VQ	|	|	|	|
3+15	0.1046	0.60	VQ	|	|	|	|
3+20	0.1087	0.60	VQ	|	|	|	|
3+25	0.1129	0.60	|Q	|	|	|	|
3+30	0.1171	0.61	|Q	|	|	|	|
3+35	0.1212	0.61	|Q	|	|	|	|
3+40	0.1254	0.61	|Q	|	|	|	|
3+45	0.1296	0.61	|Q	|	|	|	|
3+50	0.1339	0.62	|Q	|	|	|	|
3+55	0.1382	0.63	|Q	|	|	|	|
4+ 0	0.1428	0.66	|Q	|	|	|	|
4+ 5	0.1476	0.69	|Q	|	|	|	|
4+10	0.1524	0.70	|Q	|	|	|	|
4+15	0.1573	0.71	|Q	|	|	|	|
4+20	0.1622	0.72	|Q	|	|	|	|
4+25	0.1673	0.74	|Q	|	|	|	|
4+30	0.1727	0.77	|Q	|	|	|	|
4+35	0.1782	0.80	|Q	|	|	|	|
4+40	0.1838	0.82	|Q	|	|	|	|
4+45	0.1895	0.82	|Q	|	|	|	|
4+50	0.1952	0.84	|Q	|	|	|	|
4+55	0.2012	0.86	|Q	|	|	|	|
5+ 0	0.2073	0.89	|Q	|	|	|	|
5+ 5	0.2136	0.91	|Q	|	|	|	|
5+10	0.2197	0.89	|Q	|	|	|	|
5+15	0.2255	0.84	|QV	|	|	|	|
5+20	0.2310	0.80	|QV	|	|	|	|
5+25	0.2366	0.80	|QV	|	|	|	|
5+30	0.2423	0.82	|QV	|	|	|	|
5+35	0.2481	0.85	|QV	|	|	|	|
5+40	0.2541	0.87	|QV	|	|	|	|
5+45	0.2603	0.90	|QV	|	|	|	|
5+50	0.2667	0.93	|QV	|	|	|	|
5+55	0.2732	0.94	|QV	|	|	|	|
6+ 0	0.2798	0.95	|QV	|	|	|	|

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 6+ 5       0.2864      0.96  |QV        |          |          |          |
 6+10       0.2932      0.99  |QV        |          |          |          |
 6+15       0.3002      1.02  | Q        |          |          |          |
 6+20       0.3074      1.05  | Q        |          |          |          |
 6+25       0.3147      1.06  | Q        |          |          |          |
 6+30       0.3221      1.07  | Q        |          |          |          |
 6+35       0.3295      1.08  | Q        |          |          |          |
 6+40       0.3371      1.10  | QV       |          |          |          |
 6+45       0.3450      1.14  | QV       |          |          |          |
 6+50       0.3530      1.17  | QV       |          |          |          |
 6+55       0.3611      1.18  | QV       |          |          |          |
 7+ 0       0.3693      1.19  | QV       |          |          |          |
 7+ 5       0.3776      1.20  | QV       |          |          |          |
 7+10       0.3859      1.20  | QV       |          |          |          |
 7+15       0.3942      1.21  | QV       |          |          |          |
 7+20       0.4026      1.22  | QV       |          |          |          |
 7+25       0.4111      1.24  | QV       |          |          |          |
 7+30       0.4199      1.27  | QV       |          |          |          |
 7+35       0.4288      1.30  | QV       |          |          |          |
 7+40       0.4380      1.33  | QV       |          |          |          |
 7+45       0.4474      1.37  | Q V      |          |          |          |
 7+50       0.4571      1.41  | Q V      |          |          |          |
 7+55       0.4671      1.44  | Q V      |          |          |          |
 8+ 0       0.4773      1.48  | Q V      |          |          |          |
 8+ 5       0.4878      1.52  |  QV      |          |          |          |
 8+10       0.4986      1.58  |  QV      |          |          |          |
 8+15       0.5100      1.65  |  QV      |          |          |          |
 8+20       0.5218      1.71  |  QV      |          |          |          |
 8+25       0.5338      1.74  |  QV      |          |          |          |
 8+30       0.5459      1.76  |  QV      |          |          |          |
 8+35       0.5581      1.78  |  Q V     |          |          |          |
 8+40       0.5706      1.81  |  Q V     |          |          |          |
 8+45       0.5834      1.85  |  Q V     |          |          |          |
 8+50       0.5964      1.89  |  Q V     |          |          |          |
 8+55       0.6096      1.92  |  Q V     |          |          |          |
 9+ 0       0.6232      1.97  |  Q V     |          |          |          |
 9+ 5       0.6370      2.01  |   QV     |          |          |          |
 9+10       0.6512      2.07  |   QV     |          |          |          |
 9+15       0.6660      2.14  |   Q V    |          |          |          |
 9+20       0.6811      2.20  |   Q V    |          |          |          |
 9+25       0.6966      2.25  |   Q V    |          |          |          |
 9+30       0.7125      2.30  |   Q V    |          |          |          |
 9+35       0.7287      2.35  |   Q V    |          |          |          |
 9+40       0.7451      2.39  |   Q V    |          |          |          |
 9+45       0.7619      2.44  |   Q V    |          |          |          |
 9+50       0.7790      2.48  |   Q  V   |          |          |          |
 9+55       0.7964      2.52  |    Q V   |          |          |          |
10+ 0       0.8141      2.57  |    Q V   |          |          |          |
10+ 5       0.8318      2.57  |    Q V   |          |          |          |
10+10       0.8488      2.47  |   Q  V   |          |          |          |
10+15       0.8644      2.27  |   Q  V   |          |          |          |
10+20       0.8790      2.12  |   Q  V   |          |          |          |
10+25       0.8931      2.05  |   Q   V  |          |          |          |
10+30       0.9069      2.00  |   Q   V  |          |          |          |
10+35       0.9207      2.00  |  Q    V  |          |          |          |
10+40       0.9349      2.06  |   Q   V  |          |          |          |
10+45       0.9500      2.19  |   Q   V  |          |          |          |
10+50       0.9658      2.30  |   Q   V  |          |          |          |
10+55       0.9820      2.35  |   Q   V  |          |          |          |
11+ 0       0.9983      2.37  |   Q    V |          |          |          |
11+ 5       1.0147      2.39  |   Q    V |          |          |          |
11+10       1.0311      2.38  |   Q    V |          |          |          |
11+15       1.0474      2.36  |   Q    V |          |          |          |
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11+20	1.0635	2.34	Q V				
11+25	1.0796	2.34	Q V				
11+30	1.0957	2.34	Q V				
11+35	1.1117	2.32	Q V				
11+40	1.1275	2.29	Q V				
11+45	1.1428	2.23	Q V				
11+50	1.1578	2.18	Q V				
11+55	1.1728	2.18	Q V				
12+ 0	1.1880	2.19	Q V				
12+ 5	1.2039	2.32	Q V				
12+10	1.2230	2.76	Q V				
12+15	1.2471	3.50	Q V				
12+20	1.2758	4.17	Q V				
12+25	1.3083	4.73	Q V				
12+30	1.3447	5.28	Q V				
12+35	1.3849	5.83	QV				
12+40	1.4298	6.52	VQ				
12+45	1.4806	7.37	VQ				
12+50	1.5364	8.11	V Q				
12+55	1.5967	8.74	V Q				
13+ 0	1.6612	9.37	V Q				
13+ 5	1.7309	10.12	V Q				
13+10	1.8094	11.40	V Q				
13+15	1.9001	13.17	V Q				
13+20	2.0007	14.62	V Q				
13+25	2.1073	15.46	V Q				
13+30	2.2177	16.03	V Q				
13+35	2.3278	15.99	V Q				
13+40	2.4269	14.39	V Q				
13+45	2.5059	11.47	Q				
13+50	2.5691	9.17	Q V				
13+55	2.6248	8.09	Q V				
14+ 0	2.6767	7.54	Q V				
14+ 5	2.7274	7.36	Q V				
14+10	2.7814	7.84	Q V				
14+15	2.8423	8.85	Q V				
14+20	2.9087	9.64	Q V				
14+25	2.9768	9.88	Q V				
14+30	3.0445	9.83	Q V				
14+35	3.1119	9.80	Q V				
14+40	3.1797	9.83	Q V				
14+45	3.2479	9.90	Q V				
14+50	3.3164	9.94	Q V				
14+55	3.3842	9.85	Q V				
15+ 0	3.4505	9.63	Q V				
15+ 5	3.5155	9.43	Q V				
15+10	3.5790	9.22	Q V				
15+15	3.6406	8.94	Q V				
15+20	3.7005	8.69	Q V				
15+25	3.7586	8.44	Q V				
15+30	3.8148	8.17	Q V				
15+35	3.8685	7.79	Q V				
15+40	3.9166	6.99	Q V				
15+45	3.9567	5.81	Q V				
15+50	3.9903	4.89	Q V				
15+55	4.0209	4.44	Q V				
16+ 0	4.0498	4.19	Q V				
16+ 5	4.0769	3.93	Q V				
16+10	4.1003	3.40	Q V				
16+15	4.1184	2.63	Q V				
16+20	4.1322	2.01	Q V				
16+25	4.1436	1.65	Q V				
16+30	4.1534	1.42	Q V				

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16+35       4.1620      1.24  | Q       |         |         |      V  |
16+40       4.1694      1.08  | Q       |         |         |      V  |
16+45       4.1759      0.94  |Q        |         |         |      V  |
16+50       4.1815      0.82  |Q        |         |         |      V  |
16+55       4.1865      0.73  |Q        |         |         |      V  |
17+ 0       4.1910      0.66  |Q        |         |         |      V  |
17+ 5       4.1952      0.61  |Q        |         |         |      V  |
17+10       4.1993      0.59  |Q        |         |         |       V |
17+15       4.2035      0.61  |Q        |         |         |       V |
17+20       4.2078      0.62  |Q        |         |         |       V |
17+25       4.2120      0.61  |Q        |         |         |       V |
17+30       4.2162      0.61  |Q        |         |         |       V |
17+35       4.2204      0.61  |Q        |         |         |       V |
17+40       4.2246      0.61  |Q        |         |         |       V |
17+45       4.2288      0.61  |Q        |         |         |       V |
17+50       4.2329      0.60  |Q        |         |         |       V |
17+55       4.2369      0.57  |Q        |         |         |       V |
18+ 0       4.2407      0.55  |Q        |         |         |       V |
18+ 5       4.2443      0.53  |Q        |         |         |       V |
18+10       4.2478      0.52  |Q        |         |         |       V |
18+15       4.2514      0.51  |Q        |         |         |       V |
18+20       4.2548      0.51  |Q        |         |         |       V |
18+25       4.2583      0.50  |Q        |         |         |       V |
18+30       4.2618      0.50  |Q        |         |         |       V |
18+35       4.2652      0.50  Q         |         |         |       V |
18+40       4.2685      0.48  Q         |         |         |       V |
18+45       4.2715      0.45  Q         |         |         |       V |
18+50       4.2744      0.42  Q         |         |         |       V |
18+55       4.2771      0.39  Q         |         |         |       V |
19+ 0       4.2795      0.35  Q         |         |         |       V |
19+ 5       4.2817      0.32  Q         |         |         |       V |
19+10       4.2839      0.32  Q         |         |         |       V |
19+15       4.2863      0.34  Q         |         |         |       V |
19+20       4.2888      0.36  Q         |         |         |       V |
19+25       4.2915      0.39  Q         |         |         |       V |
19+30       4.2943      0.42  Q         |         |         |       V |
19+35       4.2974      0.44  Q         |         |         |       V |
19+40       4.3003      0.43  Q         |         |         |       V |
19+45       4.3031      0.41  Q         |         |         |       V |
19+50       4.3058      0.39  Q         |         |         |        V|
19+55       4.3083      0.36  Q         |         |         |        V|
20+ 0       4.3106      0.33  Q         |         |         |        V|
20+ 5       4.3127      0.31  Q         |         |         |        V|
20+10       4.3148      0.31  Q         |         |         |        V|
20+15       4.3171      0.33  Q         |         |         |        V|
20+20       4.3195      0.35  Q         |         |         |        V|
20+25       4.3219      0.36  Q         |         |         |        V|
20+30       4.3244      0.36  Q         |         |         |        V|
20+35       4.3269      0.36  Q         |         |         |        V|
20+40       4.3294      0.36  Q         |         |         |        V|
20+45       4.3319      0.36  Q         |         |         |        V|
20+50       4.3343      0.36  Q         |         |         |        V|
20+55       4.3367      0.34  Q         |         |         |        V|
21+ 0       4.3389      0.31  Q         |         |         |        V|
21+ 5       4.3409      0.30  Q         |         |         |        V|
21+10       4.3430      0.30  Q         |         |         |        V|
21+15       4.3452      0.32  Q         |         |         |        V|
21+20       4.3475      0.34  Q         |         |         |        V|
21+25       4.3498      0.33  Q         |         |         |        V|
21+30       4.3519      0.30  Q         |         |         |        V|
21+35       4.3539      0.29  Q         |         |         |        V|
21+40       4.3559      0.29  Q         |         |         |        V|
21+45       4.3581      0.32  Q         |         |         |        V|
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21+50	4.3604	0.33	Q	|	|	|	V|
21+55	4.3626	0.33	Q	|	|	|	V|
22+ 0	4.3647	0.30	Q	|	|	|	V|
22+ 5	4.3666	0.28	Q	|	|	|	V|
22+10	4.3686	0.29	Q	|	|	|	V|
22+15	4.3708	0.32	Q	|	|	|	V|
22+20	4.3731	0.33	Q	|	|	|	V|
22+25	4.3753	0.32	Q	|	|	|	V|
22+30	4.3774	0.30	Q	|	|	|	V|
22+35	4.3793	0.28	Q	|	|	|	V|
22+40	4.3812	0.27	Q	|	|	|	V|
22+45	4.3830	0.26	Q	|	|	|	V|
22+50	4.3848	0.26	Q	|	|	|	V|
22+55	4.3865	0.26	Q	|	|	|	V|
23+ 0	4.3883	0.26	Q	|	|	|	V|
23+ 5	4.3901	0.25	Q	|	|	|	V|
23+10	4.3918	0.25	Q	|	|	|	V|
23+15	4.3935	0.25	Q	|	|	|	V|
23+20	4.3952	0.25	Q	|	|	|	V|
23+25	4.3970	0.25	Q	|	|	|	V|
23+30	4.3987	0.25	Q	|	|	|	V|
23+35	4.4004	0.25	Q	|	|	|	V|
23+40	4.4021	0.25	Q	|	|	|	V|
23+45	4.4038	0.25	Q	|	|	|	V|
23+50	4.4055	0.25	Q	|	|	|	V|
23+55	4.4072	0.25	Q	|	|	|	V|
24+ 0	4.4089	0.25	Q	|	|	|	V|
24+ 5	4.4105	0.24	Q	|	|	|	V|
24+10	4.4119	0.20	Q	|	|	|	V|
24+15	4.4129	0.14	Q	|	|	|	V|
24+20	4.4135	0.09	Q	|	|	|	V|
24+25	4.4140	0.07	Q	|	|	|	V|
24+30	4.4144	0.06	Q	|	|	|	V|
24+35	4.4147	0.04	Q	|	|	|	V|
24+40	4.4149	0.04	Q	|	|	|	V|
24+45	4.4152	0.03	Q	|	|	|	V|
24+50	4.4153	0.02	Q	|	|	|	V|
24+55	4.4155	0.02	Q	|	|	|	V|
25+ 0	4.4156	0.02	Q	|	|	|	V|
25+ 5	4.4157	0.01	Q	|	|	|	V|
25+10	4.4158	0.01	Q	|	|	|	V|
25+15	4.4158	0.01	Q	|	|	|	V|
25+20	4.4159	0.01	Q	|	|	|	V|
25+25	4.4159	0.01	Q	|	|	|	V|
25+30	4.4159	0.00	Q	|	|	|	V|
25+35	4.4160	0.00	Q	|	|	|	V|
25+40	4.4160	0.00	Q	|	|	|	V|
25+45	4.4160	0.00	Q	|	|	|	V|
25+50	4.4160	0.00	Q	|	|	|	V

C.2 – EXISTING UNIT HYDROGRAPH ANALYSIS, AREA “XB”

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

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Study date 07/10/25 File: xb242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 "TRES CERRITOS" PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
EXISTING AREA "XB (EAST)
2-YEAR
24-HOUR

Drainage Area = 19.51(Ac.) = 0.030 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 19.51(Ac.) = 0.030 Sq. Mi.
Length along longest watercourse = 2520.00(Ft.)
Length along longest watercourse measured to centroid = 1447.00(Ft.)
Length along longest watercourse = 0.477 Mi.
Length along longest watercourse measured to centroid = 0.274 Mi.
Difference in elevation = 378.80(Ft.)
Slope along watercourse = 793.6762 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.093 Hr.
Lag time = 5.61 Min.
25% of lag time = 1.40 Min.
40% of lag time = 2.24 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
19.51	1.80	35.12

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
19.51	4.50	87.80

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
19.510	85.50	0.000

Total Area Entered = 19.51(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
85.5	70.8	0.353	0.000	0.353	1.000	0.353
					Sum (F) =	0.353

Area averaged mean soil loss (F) (In/Hr) = 0.353
Minimum soil loss rate ((In/Hr)) = 0.176
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	89.148	15.926	3.131
2	0.167	178.295	46.917	9.225
3	0.250	267.443	17.604	3.461
4	0.333	356.591	7.693	1.513
5	0.417	445.738	4.470	0.879
6	0.500	534.886	2.844	0.559
7	0.583	624.034	1.958	0.385
8	0.667	713.181	1.259	0.248
9	0.750	802.329	1.329	0.261
		Sum = 100.000	Sum=	19.662

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.625)		0.013	0.001
2	0.17	0.07	0.014	(0.623)		0.013	0.001
3	0.25	0.07	0.014	(0.620)		0.013	0.001
4	0.33	0.10	0.022	(0.618)		0.019	0.002
5	0.42	0.10	0.022	(0.615)		0.019	0.002
6	0.50	0.10	0.022	(0.613)		0.019	0.002
7	0.58	0.10	0.022	(0.611)		0.019	0.002
8	0.67	0.10	0.022	(0.608)		0.019	0.002
9	0.75	0.10	0.022	(0.606)		0.019	0.002
10	0.83	0.13	0.029	(0.603)		0.026	0.003
11	0.92	0.13	0.029	(0.601)		0.026	0.003
12	1.00	0.13	0.029	(0.599)		0.026	0.003
13	1.08	0.10	0.022	(0.596)		0.019	0.002
14	1.17	0.10	0.022	(0.594)		0.019	0.002
15	1.25	0.10	0.022	(0.592)		0.019	0.002
16	1.33	0.10	0.022	(0.589)		0.019	0.002
17	1.42	0.10	0.022	(0.587)		0.019	0.002

18	1.50	0.10	0.022	(0.585)	0.019	0.002
19	1.58	0.10	0.022	(0.582)	0.019	0.002
20	1.67	0.10	0.022	(0.580)	0.019	0.002
21	1.75	0.10	0.022	(0.578)	0.019	0.002
22	1.83	0.13	0.029	(0.575)	0.026	0.003
23	1.92	0.13	0.029	(0.573)	0.026	0.003
24	2.00	0.13	0.029	(0.571)	0.026	0.003
25	2.08	0.13	0.029	(0.568)	0.026	0.003
26	2.17	0.13	0.029	(0.566)	0.026	0.003
27	2.25	0.13	0.029	(0.564)	0.026	0.003
28	2.33	0.13	0.029	(0.561)	0.026	0.003
29	2.42	0.13	0.029	(0.559)	0.026	0.003
30	2.50	0.13	0.029	(0.557)	0.026	0.003
31	2.58	0.17	0.036	(0.555)	0.032	0.004
32	2.67	0.17	0.036	(0.552)	0.032	0.004
33	2.75	0.17	0.036	(0.550)	0.032	0.004
34	2.83	0.17	0.036	(0.548)	0.032	0.004
35	2.92	0.17	0.036	(0.545)	0.032	0.004
36	3.00	0.17	0.036	(0.543)	0.032	0.004
37	3.08	0.17	0.036	(0.541)	0.032	0.004
38	3.17	0.17	0.036	(0.539)	0.032	0.004
39	3.25	0.17	0.036	(0.536)	0.032	0.004
40	3.33	0.17	0.036	(0.534)	0.032	0.004
41	3.42	0.17	0.036	(0.532)	0.032	0.004
42	3.50	0.17	0.036	(0.530)	0.032	0.004
43	3.58	0.17	0.036	(0.528)	0.032	0.004
44	3.67	0.17	0.036	(0.525)	0.032	0.004
45	3.75	0.17	0.036	(0.523)	0.032	0.004
46	3.83	0.20	0.043	(0.521)	0.039	0.004
47	3.92	0.20	0.043	(0.519)	0.039	0.004
48	4.00	0.20	0.043	(0.517)	0.039	0.004
49	4.08	0.20	0.043	(0.514)	0.039	0.004
50	4.17	0.20	0.043	(0.512)	0.039	0.004
51	4.25	0.20	0.043	(0.510)	0.039	0.004
52	4.33	0.23	0.050	(0.508)	0.045	0.005
53	4.42	0.23	0.050	(0.506)	0.045	0.005
54	4.50	0.23	0.050	(0.503)	0.045	0.005
55	4.58	0.23	0.050	(0.501)	0.045	0.005
56	4.67	0.23	0.050	(0.499)	0.045	0.005
57	4.75	0.23	0.050	(0.497)	0.045	0.005
58	4.83	0.27	0.058	(0.495)	0.052	0.006
59	4.92	0.27	0.058	(0.493)	0.052	0.006
60	5.00	0.27	0.058	(0.491)	0.052	0.006
61	5.08	0.20	0.043	(0.488)	0.039	0.004
62	5.17	0.20	0.043	(0.486)	0.039	0.004
63	5.25	0.20	0.043	(0.484)	0.039	0.004
64	5.33	0.23	0.050	(0.482)	0.045	0.005
65	5.42	0.23	0.050	(0.480)	0.045	0.005
66	5.50	0.23	0.050	(0.478)	0.045	0.005
67	5.58	0.27	0.058	(0.476)	0.052	0.006
68	5.67	0.27	0.058	(0.474)	0.052	0.006
69	5.75	0.27	0.058	(0.472)	0.052	0.006
70	5.83	0.27	0.058	(0.470)	0.052	0.006
71	5.92	0.27	0.058	(0.467)	0.052	0.006
72	6.00	0.27	0.058	(0.465)	0.052	0.006
73	6.08	0.30	0.065	(0.463)	0.058	0.006
74	6.17	0.30	0.065	(0.461)	0.058	0.006
75	6.25	0.30	0.065	(0.459)	0.058	0.006
76	6.33	0.30	0.065	(0.457)	0.058	0.006
77	6.42	0.30	0.065	(0.455)	0.058	0.006
78	6.50	0.30	0.065	(0.453)	0.058	0.006
79	6.58	0.33	0.072	(0.451)	0.065	0.007
80	6.67	0.33	0.072	(0.449)	0.065	0.007

81	6.75	0.33	0.072	(0.447)	0.065	0.007
82	6.83	0.33	0.072	(0.445)	0.065	0.007
83	6.92	0.33	0.072	(0.443)	0.065	0.007
84	7.00	0.33	0.072	(0.441)	0.065	0.007
85	7.08	0.33	0.072	(0.439)	0.065	0.007
86	7.17	0.33	0.072	(0.437)	0.065	0.007
87	7.25	0.33	0.072	(0.435)	0.065	0.007
88	7.33	0.37	0.079	(0.433)	0.071	0.008
89	7.42	0.37	0.079	(0.431)	0.071	0.008
90	7.50	0.37	0.079	(0.429)	0.071	0.008
91	7.58	0.40	0.086	(0.427)	0.078	0.009
92	7.67	0.40	0.086	(0.425)	0.078	0.009
93	7.75	0.40	0.086	(0.423)	0.078	0.009
94	7.83	0.43	0.094	(0.421)	0.084	0.009
95	7.92	0.43	0.094	(0.419)	0.084	0.009
96	8.00	0.43	0.094	(0.417)	0.084	0.009
97	8.08	0.50	0.108	(0.415)	0.097	0.011
98	8.17	0.50	0.108	(0.413)	0.097	0.011
99	8.25	0.50	0.108	(0.411)	0.097	0.011
100	8.33	0.50	0.108	(0.410)	0.097	0.011
101	8.42	0.50	0.108	(0.408)	0.097	0.011
102	8.50	0.50	0.108	(0.406)	0.097	0.011
103	8.58	0.53	0.115	(0.404)	0.104	0.012
104	8.67	0.53	0.115	(0.402)	0.104	0.012
105	8.75	0.53	0.115	(0.400)	0.104	0.012
106	8.83	0.57	0.122	(0.398)	0.110	0.012
107	8.92	0.57	0.122	(0.396)	0.110	0.012
108	9.00	0.57	0.122	(0.394)	0.110	0.012
109	9.08	0.63	0.137	(0.392)	0.123	0.014
110	9.17	0.63	0.137	(0.391)	0.123	0.014
111	9.25	0.63	0.137	(0.389)	0.123	0.014
112	9.33	0.67	0.144	(0.387)	0.130	0.014
113	9.42	0.67	0.144	(0.385)	0.130	0.014
114	9.50	0.67	0.144	(0.383)	0.130	0.014
115	9.58	0.70	0.151	(0.381)	0.136	0.015
116	9.67	0.70	0.151	(0.380)	0.136	0.015
117	9.75	0.70	0.151	(0.378)	0.136	0.015
118	9.83	0.73	0.158	(0.376)	0.143	0.016
119	9.92	0.73	0.158	(0.374)	0.143	0.016
120	10.00	0.73	0.158	(0.372)	0.143	0.016
121	10.08	0.50	0.108	(0.371)	0.097	0.011
122	10.17	0.50	0.108	(0.369)	0.097	0.011
123	10.25	0.50	0.108	(0.367)	0.097	0.011
124	10.33	0.50	0.108	(0.365)	0.097	0.011
125	10.42	0.50	0.108	(0.363)	0.097	0.011
126	10.50	0.50	0.108	(0.362)	0.097	0.011
127	10.58	0.67	0.144	(0.360)	0.130	0.014
128	10.67	0.67	0.144	(0.358)	0.130	0.014
129	10.75	0.67	0.144	(0.356)	0.130	0.014
130	10.83	0.67	0.144	(0.355)	0.130	0.014
131	10.92	0.67	0.144	(0.353)	0.130	0.014
132	11.00	0.67	0.144	(0.351)	0.130	0.014
133	11.08	0.63	0.137	(0.349)	0.123	0.014
134	11.17	0.63	0.137	(0.348)	0.123	0.014
135	11.25	0.63	0.137	(0.346)	0.123	0.014
136	11.33	0.63	0.137	(0.344)	0.123	0.014
137	11.42	0.63	0.137	(0.343)	0.123	0.014
138	11.50	0.63	0.137	(0.341)	0.123	0.014
139	11.58	0.57	0.122	(0.339)	0.110	0.012
140	11.67	0.57	0.122	(0.337)	0.110	0.012
141	11.75	0.57	0.122	(0.336)	0.110	0.012
142	11.83	0.60	0.130	(0.334)	0.117	0.013
143	11.92	0.60	0.130	(0.332)	0.117	0.013

144	12.00	0.60	0.130	(0.331)	0.117	0.013
145	12.08	0.83	0.180	(0.329)	0.162	0.018
146	12.17	0.83	0.180	(0.327)	0.162	0.018
147	12.25	0.83	0.180	(0.326)	0.162	0.018
148	12.33	0.87	0.187	(0.324)	0.168	0.019
149	12.42	0.87	0.187	(0.323)	0.168	0.019
150	12.50	0.87	0.187	(0.321)	0.168	0.019
151	12.58	0.93	0.202	(0.319)	0.181	0.020
152	12.67	0.93	0.202	(0.318)	0.181	0.020
153	12.75	0.93	0.202	(0.316)	0.181	0.020
154	12.83	0.97	0.209	(0.315)	0.188	0.021
155	12.92	0.97	0.209	(0.313)	0.188	0.021
156	13.00	0.97	0.209	(0.311)	0.188	0.021
157	13.08	1.13	0.245	(0.310)	0.220	0.024
158	13.17	1.13	0.245	(0.308)	0.220	0.024
159	13.25	1.13	0.245	(0.307)	0.220	0.024
160	13.33	1.13	0.245	(0.305)	0.220	0.024
161	13.42	1.13	0.245	(0.304)	0.220	0.024
162	13.50	1.13	0.245	(0.302)	0.220	0.024
163	13.58	0.77	0.166	(0.300)	0.149	0.017
164	13.67	0.77	0.166	(0.299)	0.149	0.017
165	13.75	0.77	0.166	(0.297)	0.149	0.017
166	13.83	0.77	0.166	(0.296)	0.149	0.017
167	13.92	0.77	0.166	(0.294)	0.149	0.017
168	14.00	0.77	0.166	(0.293)	0.149	0.017
169	14.08	0.90	0.194	(0.291)	0.175	0.019
170	14.17	0.90	0.194	(0.290)	0.175	0.019
171	14.25	0.90	0.194	(0.288)	0.175	0.019
172	14.33	0.87	0.187	(0.287)	0.168	0.019
173	14.42	0.87	0.187	(0.285)	0.168	0.019
174	14.50	0.87	0.187	(0.284)	0.168	0.019
175	14.58	0.87	0.187	(0.283)	0.168	0.019
176	14.67	0.87	0.187	(0.281)	0.168	0.019
177	14.75	0.87	0.187	(0.280)	0.168	0.019
178	14.83	0.83	0.180	(0.278)	0.162	0.018
179	14.92	0.83	0.180	(0.277)	0.162	0.018
180	15.00	0.83	0.180	(0.275)	0.162	0.018
181	15.08	0.80	0.173	(0.274)	0.156	0.017
182	15.17	0.80	0.173	(0.273)	0.156	0.017
183	15.25	0.80	0.173	(0.271)	0.156	0.017
184	15.33	0.77	0.166	(0.270)	0.149	0.017
185	15.42	0.77	0.166	(0.268)	0.149	0.017
186	15.50	0.77	0.166	(0.267)	0.149	0.017
187	15.58	0.63	0.137	(0.266)	0.123	0.014
188	15.67	0.63	0.137	(0.264)	0.123	0.014
189	15.75	0.63	0.137	(0.263)	0.123	0.014
190	15.83	0.63	0.137	(0.262)	0.123	0.014
191	15.92	0.63	0.137	(0.260)	0.123	0.014
192	16.00	0.63	0.137	(0.259)	0.123	0.014
193	16.08	0.13	0.029	(0.258)	0.026	0.003
194	16.17	0.13	0.029	(0.256)	0.026	0.003
195	16.25	0.13	0.029	(0.255)	0.026	0.003
196	16.33	0.13	0.029	(0.254)	0.026	0.003
197	16.42	0.13	0.029	(0.252)	0.026	0.003
198	16.50	0.13	0.029	(0.251)	0.026	0.003
199	16.58	0.10	0.022	(0.250)	0.019	0.002
200	16.67	0.10	0.022	(0.249)	0.019	0.002
201	16.75	0.10	0.022	(0.247)	0.019	0.002
202	16.83	0.10	0.022	(0.246)	0.019	0.002
203	16.92	0.10	0.022	(0.245)	0.019	0.002
204	17.00	0.10	0.022	(0.244)	0.019	0.002
205	17.08	0.17	0.036	(0.242)	0.032	0.004
206	17.17	0.17	0.036	(0.241)	0.032	0.004

207	17.25	0.17	0.036	(0.240)	0.032	0.004
208	17.33	0.17	0.036	(0.239)	0.032	0.004
209	17.42	0.17	0.036	(0.237)	0.032	0.004
210	17.50	0.17	0.036	(0.236)	0.032	0.004
211	17.58	0.17	0.036	(0.235)	0.032	0.004
212	17.67	0.17	0.036	(0.234)	0.032	0.004
213	17.75	0.17	0.036	(0.233)	0.032	0.004
214	17.83	0.13	0.029	(0.232)	0.026	0.003
215	17.92	0.13	0.029	(0.230)	0.026	0.003
216	18.00	0.13	0.029	(0.229)	0.026	0.003
217	18.08	0.13	0.029	(0.228)	0.026	0.003
218	18.17	0.13	0.029	(0.227)	0.026	0.003
219	18.25	0.13	0.029	(0.226)	0.026	0.003
220	18.33	0.13	0.029	(0.225)	0.026	0.003
221	18.42	0.13	0.029	(0.224)	0.026	0.003
222	18.50	0.13	0.029	(0.223)	0.026	0.003
223	18.58	0.10	0.022	(0.222)	0.019	0.002
224	18.67	0.10	0.022	(0.221)	0.019	0.002
225	18.75	0.10	0.022	(0.219)	0.019	0.002
226	18.83	0.07	0.014	(0.218)	0.013	0.001
227	18.92	0.07	0.014	(0.217)	0.013	0.001
228	19.00	0.07	0.014	(0.216)	0.013	0.001
229	19.08	0.10	0.022	(0.215)	0.019	0.002
230	19.17	0.10	0.022	(0.214)	0.019	0.002
231	19.25	0.10	0.022	(0.213)	0.019	0.002
232	19.33	0.13	0.029	(0.212)	0.026	0.003
233	19.42	0.13	0.029	(0.211)	0.026	0.003
234	19.50	0.13	0.029	(0.210)	0.026	0.003
235	19.58	0.10	0.022	(0.209)	0.019	0.002
236	19.67	0.10	0.022	(0.208)	0.019	0.002
237	19.75	0.10	0.022	(0.207)	0.019	0.002
238	19.83	0.07	0.014	(0.207)	0.013	0.001
239	19.92	0.07	0.014	(0.206)	0.013	0.001
240	20.00	0.07	0.014	(0.205)	0.013	0.001
241	20.08	0.10	0.022	(0.204)	0.019	0.002
242	20.17	0.10	0.022	(0.203)	0.019	0.002
243	20.25	0.10	0.022	(0.202)	0.019	0.002
244	20.33	0.10	0.022	(0.201)	0.019	0.002
245	20.42	0.10	0.022	(0.200)	0.019	0.002
246	20.50	0.10	0.022	(0.199)	0.019	0.002
247	20.58	0.10	0.022	(0.199)	0.019	0.002
248	20.67	0.10	0.022	(0.198)	0.019	0.002
249	20.75	0.10	0.022	(0.197)	0.019	0.002
250	20.83	0.07	0.014	(0.196)	0.013	0.001
251	20.92	0.07	0.014	(0.195)	0.013	0.001
252	21.00	0.07	0.014	(0.195)	0.013	0.001
253	21.08	0.10	0.022	(0.194)	0.019	0.002
254	21.17	0.10	0.022	(0.193)	0.019	0.002
255	21.25	0.10	0.022	(0.192)	0.019	0.002
256	21.33	0.07	0.014	(0.192)	0.013	0.001
257	21.42	0.07	0.014	(0.191)	0.013	0.001
258	21.50	0.07	0.014	(0.190)	0.013	0.001
259	21.58	0.10	0.022	(0.189)	0.019	0.002
260	21.67	0.10	0.022	(0.189)	0.019	0.002
261	21.75	0.10	0.022	(0.188)	0.019	0.002
262	21.83	0.07	0.014	(0.187)	0.013	0.001
263	21.92	0.07	0.014	(0.187)	0.013	0.001
264	22.00	0.07	0.014	(0.186)	0.013	0.001
265	22.08	0.10	0.022	(0.186)	0.019	0.002
266	22.17	0.10	0.022	(0.185)	0.019	0.002
267	22.25	0.10	0.022	(0.184)	0.019	0.002
268	22.33	0.07	0.014	(0.184)	0.013	0.001
269	22.42	0.07	0.014	(0.183)	0.013	0.001

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270  22.50     0.07      0.014       (  0.183)       0.013        0.001
271  22.58     0.07      0.014       (  0.182)       0.013        0.001
272  22.67     0.07      0.014       (  0.182)       0.013        0.001
273  22.75     0.07      0.014       (  0.181)       0.013        0.001
274  22.83     0.07      0.014       (  0.181)       0.013        0.001
275  22.92     0.07      0.014       (  0.180)       0.013        0.001
276  23.00     0.07      0.014       (  0.180)       0.013        0.001
277  23.08     0.07      0.014       (  0.179)       0.013        0.001
278  23.17     0.07      0.014       (  0.179)       0.013        0.001
279  23.25     0.07      0.014       (  0.179)       0.013        0.001
280  23.33     0.07      0.014       (  0.178)       0.013        0.001
281  23.42     0.07      0.014       (  0.178)       0.013        0.001
282  23.50     0.07      0.014       (  0.178)       0.013        0.001
283  23.58     0.07      0.014       (  0.177)       0.013        0.001
284  23.67     0.07      0.014       (  0.177)       0.013        0.001
285  23.75     0.07      0.014       (  0.177)       0.013        0.001
286  23.83     0.07      0.014       (  0.177)       0.013        0.001
287  23.92     0.07      0.014       (  0.176)       0.013        0.001
288  24.00     0.07      0.014       (  0.176)       0.013        0.001
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     2.2
       Flood volume = Effective rainfall      0.18(In)
        times area      19.5(Ac.)/[(In)/(Ft.)] =       0.3(Ac.Ft)
       Total soil loss =      1.62(In)
       Total soil loss =     2.634(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =       12747.3 Cubic Feet
       Total soil loss =      114726.1 Cubic Feet
       ------------------------------------------------------------------------
        Peak flow rate of this hydrograph =      0.478(CFS)
       ------------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q         |         |         |         |
   0+10       0.0002      0.02  Q         |         |         |         |
   0+15       0.0003      0.02  Q         |         |         |         |
   0+20       0.0005      0.03  Q         |         |         |         |
   0+25       0.0007      0.04  Q         |         |         |         |
   0+30       0.0010      0.04  Q         |         |         |         |
   0+35       0.0013      0.04  Q         |         |         |         |
   0+40       0.0016      0.04  Q         |         |         |         |
   0+45       0.0019      0.04  Q         |         |         |         |
   0+50       0.0022      0.04  Q         |         |         |         |
   0+55       0.0025      0.05  Q         |         |         |         |
   1+ 0       0.0029      0.05  Q         |         |         |         |
   1+ 5       0.0032      0.05  Q         |         |         |         |
   1+10       0.0036      0.05  Q         |         |         |         |
   1+15       0.0039      0.04  Q         |         |         |         |
   1+20       0.0042      0.04  Q         |         |         |         |
   1+25       0.0045      0.04  Q         |         |         |         |
   1+30       0.0048      0.04  Q         |         |         |         |
   1+35       0.0051      0.04  Q         |         |         |         |
   1+40       0.0054      0.04  Q         |         |         |         |
   1+45       0.0057      0.04  Q         |         |         |         |
   1+50       0.0060      0.04  Q         |         |         |         |
   1+55       0.0063      0.05  Q         |         |         |         |
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2+ 0	0.0067	0.05	Q	|	|	|	|
2+ 5	0.0071	0.05	Q	|	|	|	|
2+10	0.0074	0.06	QV	|	|	|	|
2+15	0.0078	0.06	QV	|	|	|	|
2+20	0.0082	0.06	QV	|	|	|	|
2+25	0.0086	0.06	QV	|	|	|	|
2+30	0.0090	0.06	QV	|	|	|	|
2+35	0.0094	0.06	QV	|	|	|	|
2+40	0.0099	0.07	QV	|	|	|	|
2+45	0.0103	0.07	QV	|	|	|	|
2+50	0.0108	0.07	QV	|	|	|	|
2+55	0.0113	0.07	QV	|	|	|	|
3+ 0	0.0118	0.07	QV	|	|	|	|
3+ 5	0.0123	0.07	QV	|	|	|	|
3+10	0.0127	0.07	QV	|	|	|	|
3+15	0.0132	0.07	QV	|	|	|	|
3+20	0.0137	0.07	QV	|	|	|	|
3+25	0.0142	0.07	QV	|	|	|	|
3+30	0.0147	0.07	Q V	|	|	|	|
3+35	0.0152	0.07	Q V	|	|	|	|
3+40	0.0157	0.07	Q V	|	|	|	|
3+45	0.0162	0.07	Q V	|	|	|	|
3+50	0.0167	0.07	Q V	|	|	|	|
3+55	0.0172	0.08	Q V	|	|	|	|
4+ 0	0.0178	0.08	Q V	|	|	|	|
4+ 5	0.0183	0.08	Q V	|	|	|	|
4+10	0.0189	0.08	Q V	|	|	|	|
4+15	0.0195	0.08	Q V	|	|	|	|
4+20	0.0201	0.09	Q V	|	|	|	|
4+25	0.0207	0.09	Q V	|	|	|	|
4+30	0.0214	0.10	Q V	|	|	|	|
4+35	0.0221	0.10	Q V	|	|	|	|
4+40	0.0228	0.10	Q V	|	|	|	|
4+45	0.0234	0.10	Q V	|	|	|	|
4+50	0.0241	0.10	Q V	|	|	|	|
4+55	0.0249	0.11	Q V	|	|	|	|
5+ 0	0.0256	0.11	Q V	|	|	|	|
5+ 5	0.0264	0.11	Q V	|	|	|	|
5+10	0.0270	0.09	Q V	|	|	|	|
5+15	0.0276	0.09	Q V	|	|	|	|
5+20	0.0283	0.09	Q V	|	|	|	|
5+25	0.0289	0.10	Q V	|	|	|	|
5+30	0.0296	0.10	Q V	|	|	|	|
5+35	0.0303	0.10	Q V	|	|	|	|
5+40	0.0310	0.11	Q V	|	|	|	|
5+45	0.0318	0.11	Q V	|	|	|	|
5+50	0.0326	0.11	Q V	|	|	|	|
5+55	0.0333	0.11	Q V	|	|	|	|
6+ 0	0.0341	0.11	Q V	|	|	|	|
6+ 5	0.0349	0.12	Q V	|	|	|	|
6+10	0.0357	0.12	Q V	|	|	|	|
6+15	0.0366	0.12	Q V	|	|	|	|
6+20	0.0375	0.13	Q V	|	|	|	|
6+25	0.0383	0.13	Q V	|	|	|	|
6+30	0.0392	0.13	Q V	|	|	|	|
6+35	0.0401	0.13	Q V	|	|	|	|
6+40	0.0410	0.14	Q V	|	|	|	|
6+45	0.0420	0.14	Q V	|	|	|	|
6+50	0.0430	0.14	Q V	|	|	|	|
6+55	0.0439	0.14	Q V	|	|	|	|
7+ 0	0.0449	0.14	Q V	|	|	|	|
7+ 5	0.0459	0.14	Q V	|	|	|	|
7+10	0.0468	0.14	Q V	|	|	|	|

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 7+15       0.0478      0.14  Q     V   |          |          |          |
 7+20       0.0488      0.14  Q     V   |          |          |          |
 7+25       0.0498      0.15  Q     V   |          |          |          |
 7+30       0.0509      0.15  Q     V   |          |          |          |
 7+35       0.0520      0.16  Q      V  |          |          |          |
 7+40       0.0531      0.16  Q      V  |          |          |          |
 7+45       0.0542      0.17  Q      V  |          |          |          |
 7+50       0.0554      0.17  Q      V  |          |          |          |
 7+55       0.0566      0.18  Q      V  |          |          |          |
 8+ 0       0.0579      0.18  Q      V  |          |          |          |
 8+ 5       0.0592      0.19  Q       V |          |          |          |
 8+10       0.0606      0.20  Q       V |          |          |          |
 8+15       0.0620      0.21  Q       V |          |          |          |
 8+20       0.0634      0.21  Q       V |          |          |          |
 8+25       0.0649      0.21  Q       V |          |          |          |
 8+30       0.0663      0.21  Q        V|          |          |          |
 8+35       0.0678      0.21  Q        V|          |          |          |
 8+40       0.0693      0.22  Q        V|          |          |          |
 8+45       0.0708      0.22  Q        V|          |          |          |
 8+50       0.0724      0.23  Q        V|          |          |          |
 8+55       0.0740      0.23  Q         V          |          |          |
 9+ 0       0.0757      0.24  Q         V          |          |          |
 9+ 5       0.0773      0.24  Q         V          |          |          |
 9+10       0.0791      0.26  |Q        V          |          |          |
 9+15       0.0809      0.26  |Q        |V         |          |          |
 9+20       0.0828      0.27  |Q        |V         |          |          |
 9+25       0.0847      0.28  |Q        |V         |          |          |
 9+30       0.0866      0.28  |Q        |V         |          |          |
 9+35       0.0885      0.28  |Q        | V        |          |          |
 9+40       0.0905      0.29  |Q        | V        |          |          |
 9+45       0.0926      0.29  |Q        | V        |          |          |
 9+50       0.0946      0.30  |Q        | V        |          |          |
 9+55       0.0967      0.31  |Q        |  V       |          |          |
10+ 0       0.0988      0.31  |Q        |  V       |          |          |
10+ 5       0.1009      0.29  |Q        |  V       |          |          |
10+10       0.1026      0.25  Q         |   V      |          |          |
10+15       0.1042      0.23  Q         |   V      |          |          |
10+20       0.1057      0.22  Q         |   V      |          |          |
10+25       0.1072      0.22  Q         |   V      |          |          |
10+30       0.1087      0.22  Q         |   V      |          |          |
10+35       0.1103      0.23  Q         |    V     |          |          |
10+40       0.1120      0.26  |Q        |    V     |          |          |
10+45       0.1139      0.27  |Q        |    V     |          |          |
10+50       0.1158      0.27  |Q        |    V     |          |          |
10+55       0.1177      0.28  |Q        |     V    |          |          |
11+ 0       0.1196      0.28  |Q        |     V    |          |          |
11+ 5       0.1216      0.28  |Q        |     V    |          |          |
11+10       0.1234      0.27  |Q        |     V    |          |          |
11+15       0.1253      0.27  |Q        |      V   |          |          |
11+20       0.1272      0.27  |Q        |      V   |          |          |
11+25       0.1290      0.27  |Q        |      V   |          |          |
11+30       0.1309      0.27  |Q        |      V   |          |          |
11+35       0.1327      0.26  |Q        |       V  |          |          |
11+40       0.1345      0.25  |Q        |       V  |          |          |
11+45       0.1362      0.25  Q         |       V  |          |          |
11+50       0.1379      0.25  Q         |       V  |          |          |
11+55       0.1396      0.25  |Q        |        V |          |          |
12+ 0       0.1413      0.25  |Q        |        V |          |          |
12+ 5       0.1432      0.27  |Q        |        V |          |          |
12+10       0.1454      0.32  |Q        |        V |          |          |
12+15       0.1477      0.33  |Q        |         V|          |          |
12+20       0.1500      0.34  |Q        |         V|          |          |
12+25       0.1525      0.36  |Q        |         V|          |          |
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12+30       0.1550      0.36  |Q        |         |V        |         |
12+35       0.1575      0.37  |Q        |         |V        |         |
12+40       0.1602      0.38  |Q        |         |V        |         |
12+45       0.1628      0.39  |Q        |         | V       |         |
12+50       0.1656      0.40  |Q        |         | V       |         |
12+55       0.1683      0.40  |Q        |         |  V      |         |
13+ 0       0.1711      0.41  |Q        |         |  V      |         |
13+ 5       0.1740      0.42  |Q        |         |  V      |         |
13+10       0.1772      0.45  |Q        |         |   V     |         |
13+15       0.1804      0.47  |Q        |         |   V     |         |
13+20       0.1836      0.47  |Q        |         |    V    |         |
13+25       0.1869      0.48  |Q        |         |    V    |         |
13+30       0.1902      0.48  |Q        |         |    V    |         |
13+35       0.1933      0.45  |Q        |         |     V   |         |
13+40       0.1960      0.38  |Q        |         |     V   |         |
13+45       0.1984      0.36  |Q        |         |      V  |         |
13+50       0.2008      0.34  |Q        |         |      V  |         |
13+55       0.2031      0.34  |Q        |         |      V  |         |
14+ 0       0.2054      0.33  |Q        |         |       V |         |
14+ 5       0.2077      0.34  |Q        |         |       V |         |
14+10       0.2103      0.36  |Q        |         |       V |         |
14+15       0.2128      0.37  |Q        |         |        V|         |
14+20       0.2154      0.37  |Q        |         |        V|         |
14+25       0.2179      0.37  |Q        |         |        V|         |
14+30       0.2205      0.37  |Q        |         |         V         |
14+35       0.2230      0.37  |Q        |         |         V         |
14+40       0.2255      0.37  |Q        |         |         V         |
14+45       0.2281      0.37  |Q        |         |         |V        |
14+50       0.2306      0.37  |Q        |         |         |V        |
14+55       0.2331      0.36  |Q        |         |         |V        |
15+ 0       0.2355      0.36  |Q        |         |         | V       |
15+ 5       0.2380      0.35  |Q        |         |         | V       |
15+10       0.2404      0.35  |Q        |         |         | V       |
15+15       0.2427      0.34  |Q        |         |         |  V      |
15+20       0.2451      0.34  |Q        |         |         |  V      |
15+25       0.2473      0.33  |Q        |         |         |  V      |
15+30       0.2496      0.33  |Q        |         |         |   V     |
15+35       0.2518      0.32  |Q        |         |         |   V     |
15+40       0.2538      0.29  |Q        |         |         |   V     |
15+45       0.2558      0.28  |Q        |         |         |   V     |
15+50       0.2577      0.28  |Q        |         |         |    V    |
15+55       0.2595      0.27  |Q        |         |         |    V    |
16+ 0       0.2614      0.27  |Q        |         |         |    V    |
16+ 5       0.2630      0.24  Q         |         |         |    V    |
16+10       0.2640      0.14  Q         |         |         |     V   |
16+15       0.2647      0.10  Q         |         |         |     V   |
16+20       0.2652      0.08  Q         |         |         |     V   |
16+25       0.2657      0.07  Q         |         |         |     V   |
16+30       0.2662      0.07  Q         |         |         |     V   |
16+35       0.2666      0.06  Q         |         |         |     V   |
16+40       0.2669      0.05  Q         |         |         |     V   |
16+45       0.2672      0.05  Q         |         |         |     V   |
16+50       0.2675      0.04  Q         |         |         |     V   |
16+55       0.2678      0.04  Q         |         |         |     V   |
17+ 0       0.2681      0.04  Q         |         |         |     V   |
17+ 5       0.2685      0.05  Q         |         |         |     V   |
17+10       0.2689      0.06  Q         |         |         |     V   |
17+15       0.2693      0.07  Q         |         |         |     V   |
17+20       0.2698      0.07  Q         |         |         |     V   |
17+25       0.2703      0.07  Q         |         |         |     V   |
17+30       0.2708      0.07  Q         |         |         |      V  |
17+35       0.2712      0.07  Q         |         |         |      V  |
17+40       0.2717      0.07  Q         |         |         |      V  |
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17+45	0.2722	0.07	Q	|	|	|	V |
17+50	0.2727	0.07	Q	|	|	|	V |
17+55	0.2731	0.06	Q	|	|	|	V |
18+ 0	0.2735	0.06	Q	|	|	|	V |
18+ 5	0.2739	0.06	Q	|	|	|	V |
18+10	0.2743	0.06	Q	|	|	|	V |
18+15	0.2747	0.06	Q	|	|	|	V |
18+20	0.2751	0.06	Q	|	|	|	V |
18+25	0.2755	0.06	Q	|	|	|	V |
18+30	0.2759	0.06	Q	|	|	|	V |
18+35	0.2763	0.05	Q	|	|	|	V |
18+40	0.2766	0.05	Q	|	|	|	V |
18+45	0.2769	0.05	Q	|	|	|	V |
18+50	0.2772	0.04	Q	|	|	|	V |
18+55	0.2774	0.03	Q	|	|	|	V |
19+ 0	0.2776	0.03	Q	|	|	|	V |
19+ 5	0.2779	0.03	Q	|	|	|	V |
19+10	0.2781	0.04	Q	|	|	|	V |
19+15	0.2784	0.04	Q	|	|	|	V |
19+20	0.2787	0.04	Q	|	|	|	V |
19+25	0.2791	0.05	Q	|	|	|	V |
19+30	0.2794	0.05	Q	|	|	|	V |
19+35	0.2798	0.05	Q	|	|	|	V |
19+40	0.2801	0.05	Q	|	|	|	V |
19+45	0.2804	0.04	Q	|	|	|	V |
19+50	0.2807	0.04	Q	|	|	|	V |
19+55	0.2809	0.03	Q	|	|	|	V |
20+ 0	0.2812	0.03	Q	|	|	|	V |
20+ 5	0.2814	0.03	Q	|	|	|	V |
20+10	0.2816	0.04	Q	|	|	|	V |
20+15	0.2819	0.04	Q	|	|	|	V |
20+20	0.2822	0.04	Q	|	|	|	V |
20+25	0.2825	0.04	Q	|	|	|	V |
20+30	0.2828	0.04	Q	|	|	|	V |
20+35	0.2831	0.04	Q	|	|	|	V |
20+40	0.2834	0.04	Q	|	|	|	V |
20+45	0.2837	0.04	Q	|	|	|	V |
20+50	0.2839	0.04	Q	|	|	|	V |
20+55	0.2842	0.03	Q	|	|	|	V |
21+ 0	0.2844	0.03	Q	|	|	|	V |
21+ 5	0.2846	0.03	Q	|	|	|	V |
21+10	0.2849	0.04	Q	|	|	|	V |
21+15	0.2851	0.04	Q	|	|	|	V |
21+20	0.2854	0.04	Q	|	|	|	V|
21+25	0.2856	0.03	Q	|	|	|	V|
21+30	0.2858	0.03	Q	|	|	|	V|
21+35	0.2861	0.03	Q	|	|	|	V|
21+40	0.2863	0.04	Q	|	|	|	V|
21+45	0.2866	0.04	Q	|	|	|	V|
21+50	0.2869	0.04	Q	|	|	|	V|
21+55	0.2871	0.03	Q	|	|	|	V|
22+ 0	0.2873	0.03	Q	|	|	|	V|
22+ 5	0.2875	0.03	Q	|	|	|	V|
22+10	0.2878	0.04	Q	|	|	|	V|
22+15	0.2881	0.04	Q	|	|	|	V|
22+20	0.2883	0.04	Q	|	|	|	V|
22+25	0.2886	0.03	Q	|	|	|	V|
22+30	0.2888	0.03	Q	|	|	|	V|
22+35	0.2890	0.03	Q	|	|	|	V|
22+40	0.2892	0.03	Q	|	|	|	V|
22+45	0.2894	0.03	Q	|	|	|	V|
22+50	0.2896	0.03	Q	|	|	|	V|
22+55	0.2898	0.03	Q	|	|	|	V|

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  23+ 0       0.2900      0.03  Q          |          |          |         V|
  23+ 5       0.2902      0.03  Q          |          |          |         V|
  23+10       0.2904      0.03  Q          |          |          |         V|
  23+15       0.2906      0.03  Q          |          |          |         V|
  23+20       0.2907      0.03  Q          |          |          |         V|
  23+25       0.2909      0.03  Q          |          |          |         V|
  23+30       0.2911      0.03  Q          |          |          |         V|
  23+35       0.2913      0.03  Q          |          |          |         V|
  23+40       0.2915      0.03  Q          |          |          |         V|
  23+45       0.2917      0.03  Q          |          |          |         V|
  23+50       0.2919      0.03  Q          |          |          |         V|
  23+55       0.2921      0.03  Q          |          |          |         V|
  24+ 0       0.2923      0.03  Q          |          |          |         V|
  24+ 5       0.2925      0.02  Q          |          |          |         V|
  24+10       0.2925      0.01  Q          |          |          |         V|
  24+15       0.2926      0.01  Q          |          |          |         V|
  24+20       0.2926      0.00  Q          |          |          |         V|
  24+25       0.2926      0.00  Q          |          |          |         V|
  24+30       0.2926      0.00  Q          |          |          |         V|
  24+35       0.2926      0.00  Q          |          |          |         V|
  24+40       0.2926      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

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Study date 07/10/25 File: xb2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 "TRES CERRITOS" PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
EXISTING AREA "XB (EAST)
10-YEAR
24-HOUR

Drainage Area = 19.51(Ac.) = 0.030 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 19.51(Ac.) = 0.030 Sq. Mi.
Length along longest watercourse = 2520.00(Ft.)
Length along longest watercourse measured to centroid = 1447.00(Ft.)
Length along longest watercourse = 0.477 Mi.
Length along longest watercourse measured to centroid = 0.274 Mi.
Difference in elevation = 378.80(Ft.)
Slope along watercourse = 793.6762 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.093 Hr.
Lag time = 5.61 Min.
25% of lag time = 1.40 Min.
40% of lag time = 2.24 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
19.51	1.80	35.12

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
19.51	4.50	87.80

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
19.510	85.50	0.000

Total Area Entered = 19.51(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
85.5	85.5	0.181	0.000	0.181	1.000	0.181
					Sum (F) =	0.181

Area averaged mean soil loss (F) (In/Hr) = 0.181
Minimum soil loss rate ((In/Hr)) = 0.091
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)	Time	% of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	89.148	15.926	3.131
2	0.167	178.295	46.917	9.225
3	0.250	267.443	17.604	3.461
4	0.333	356.591	7.693	1.513
5	0.417	445.738	4.470	0.879
6	0.500	534.886	2.844	0.559
7	0.583	624.034	1.958	0.385
8	0.667	713.181	1.259	0.248
9	0.750	802.329	1.329	0.261
		Sum =	100.000 Sum=	19.662

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.321)		0.021	0.002
2	0.17	0.07	0.023	(0.320)		0.021	0.002
3	0.25	0.07	0.023	(0.319)		0.021	0.002
4	0.33	0.10	0.035	(0.318)		0.031	0.003
5	0.42	0.10	0.035	(0.316)		0.031	0.003
6	0.50	0.10	0.035	(0.315)		0.031	0.003
7	0.58	0.10	0.035	(0.314)		0.031	0.003
8	0.67	0.10	0.035	(0.313)		0.031	0.003
9	0.75	0.10	0.035	(0.312)		0.031	0.003
10	0.83	0.13	0.047	(0.310)		0.042	0.005
11	0.92	0.13	0.047	(0.309)		0.042	0.005
12	1.00	0.13	0.047	(0.308)		0.042	0.005
13	1.08	0.10	0.035	(0.307)		0.031	0.003
14	1.17	0.10	0.035	(0.305)		0.031	0.003
15	1.25	0.10	0.035	(0.304)		0.031	0.003
16	1.33	0.10	0.035	(0.303)		0.031	0.003
17	1.42	0.10	0.035	(0.302)		0.031	0.003

18	1.50	0.10	0.035	(0.301)	0.031	0.003
19	1.58	0.10	0.035	(0.299)	0.031	0.003
20	1.67	0.10	0.035	(0.298)	0.031	0.003
21	1.75	0.10	0.035	(0.297)	0.031	0.003
22	1.83	0.13	0.047	(0.296)	0.042	0.005
23	1.92	0.13	0.047	(0.295)	0.042	0.005
24	2.00	0.13	0.047	(0.293)	0.042	0.005
25	2.08	0.13	0.047	(0.292)	0.042	0.005
26	2.17	0.13	0.047	(0.291)	0.042	0.005
27	2.25	0.13	0.047	(0.290)	0.042	0.005
28	2.33	0.13	0.047	(0.289)	0.042	0.005
29	2.42	0.13	0.047	(0.288)	0.042	0.005
30	2.50	0.13	0.047	(0.286)	0.042	0.005
31	2.58	0.17	0.058	(0.285)	0.052	0.006
32	2.67	0.17	0.058	(0.284)	0.052	0.006
33	2.75	0.17	0.058	(0.283)	0.052	0.006
34	2.83	0.17	0.058	(0.282)	0.052	0.006
35	2.92	0.17	0.058	(0.280)	0.052	0.006
36	3.00	0.17	0.058	(0.279)	0.052	0.006
37	3.08	0.17	0.058	(0.278)	0.052	0.006
38	3.17	0.17	0.058	(0.277)	0.052	0.006
39	3.25	0.17	0.058	(0.276)	0.052	0.006
40	3.33	0.17	0.058	(0.275)	0.052	0.006
41	3.42	0.17	0.058	(0.274)	0.052	0.006
42	3.50	0.17	0.058	(0.272)	0.052	0.006
43	3.58	0.17	0.058	(0.271)	0.052	0.006
44	3.67	0.17	0.058	(0.270)	0.052	0.006
45	3.75	0.17	0.058	(0.269)	0.052	0.006
46	3.83	0.20	0.070	(0.268)	0.063	0.007
47	3.92	0.20	0.070	(0.267)	0.063	0.007
48	4.00	0.20	0.070	(0.266)	0.063	0.007
49	4.08	0.20	0.070	(0.264)	0.063	0.007
50	4.17	0.20	0.070	(0.263)	0.063	0.007
51	4.25	0.20	0.070	(0.262)	0.063	0.007
52	4.33	0.23	0.081	(0.261)	0.073	0.008
53	4.42	0.23	0.081	(0.260)	0.073	0.008
54	4.50	0.23	0.081	(0.259)	0.073	0.008
55	4.58	0.23	0.081	(0.258)	0.073	0.008
56	4.67	0.23	0.081	(0.257)	0.073	0.008
57	4.75	0.23	0.081	(0.256)	0.073	0.008
58	4.83	0.27	0.093	(0.254)	0.084	0.009
59	4.92	0.27	0.093	(0.253)	0.084	0.009
60	5.00	0.27	0.093	(0.252)	0.084	0.009
61	5.08	0.20	0.070	(0.251)	0.063	0.007
62	5.17	0.20	0.070	(0.250)	0.063	0.007
63	5.25	0.20	0.070	(0.249)	0.063	0.007
64	5.33	0.23	0.081	(0.248)	0.073	0.008
65	5.42	0.23	0.081	(0.247)	0.073	0.008
66	5.50	0.23	0.081	(0.246)	0.073	0.008
67	5.58	0.27	0.093	(0.245)	0.084	0.009
68	5.67	0.27	0.093	(0.244)	0.084	0.009
69	5.75	0.27	0.093	(0.243)	0.084	0.009
70	5.83	0.27	0.093	(0.241)	0.084	0.009
71	5.92	0.27	0.093	(0.240)	0.084	0.009
72	6.00	0.27	0.093	(0.239)	0.084	0.009
73	6.08	0.30	0.105	(0.238)	0.094	0.010
74	6.17	0.30	0.105	(0.237)	0.094	0.010
75	6.25	0.30	0.105	(0.236)	0.094	0.010
76	6.33	0.30	0.105	(0.235)	0.094	0.010
77	6.42	0.30	0.105	(0.234)	0.094	0.010
78	6.50	0.30	0.105	(0.233)	0.094	0.010
79	6.58	0.33	0.116	(0.232)	0.105	0.012
80	6.67	0.33	0.116	(0.231)	0.105	0.012

81	6.75	0.33	0.116	(	0.230)		0.105		0.012
82	6.83	0.33	0.116	(	0.229)		0.105		0.012
83	6.92	0.33	0.116	(	0.228)		0.105		0.012
84	7.00	0.33	0.116	(	0.227)		0.105		0.012
85	7.08	0.33	0.116	(	0.226)		0.105		0.012
86	7.17	0.33	0.116	(	0.225)		0.105		0.012
87	7.25	0.33	0.116	(	0.224)		0.105		0.012
88	7.33	0.37	0.128	(	0.223)		0.115		0.013
89	7.42	0.37	0.128	(	0.222)		0.115		0.013
90	7.50	0.37	0.128	(	0.221)		0.115		0.013
91	7.58	0.40	0.140	(	0.220)		0.126		0.014
92	7.67	0.40	0.140	(	0.219)		0.126		0.014
93	7.75	0.40	0.140	(	0.218)		0.126		0.014
94	7.83	0.43	0.151	(	0.217)		0.136		0.015
95	7.92	0.43	0.151	(	0.216)		0.136		0.015
96	8.00	0.43	0.151	(	0.215)		0.136		0.015
97	8.08	0.50	0.175	(	0.214)		0.157		0.017
98	8.17	0.50	0.175	(	0.213)		0.157		0.017
99	8.25	0.50	0.175	(	0.212)		0.157		0.017
100	8.33	0.50	0.175	(	0.211)		0.157		0.017
101	8.42	0.50	0.175	(	0.210)		0.157		0.017
102	8.50	0.50	0.175	(	0.209)		0.157		0.017
103	8.58	0.53	0.186	(	0.208)		0.168		0.019
104	8.67	0.53	0.186	(	0.207)		0.168		0.019
105	8.75	0.53	0.186	(	0.206)		0.168		0.019
106	8.83	0.57	0.198	(	0.205)		0.178		0.020
107	8.92	0.57	0.198	(	0.204)		0.178		0.020
108	9.00	0.57	0.198	(	0.203)		0.178		0.020
109	9.08	0.63	0.221	(	0.202)		0.199		0.022
110	9.17	0.63	0.221	(	0.201)		0.199		0.022
111	9.25	0.63	0.221	(	0.200)		0.199		0.022
112	9.33	0.67	0.233		0.199	(	0.210)		0.034
113	9.42	0.67	0.233		0.198	(	0.210)		0.035
114	9.50	0.67	0.233		0.197	(	0.210)		0.036
115	9.58	0.70	0.244		0.196	(	0.220)		0.048
116	9.67	0.70	0.244		0.195	(	0.220)		0.049
117	9.75	0.70	0.244		0.194	(	0.220)		0.050
118	9.83	0.73	0.256		0.193	(	0.231)		0.063
119	9.92	0.73	0.256		0.192	(	0.231)		0.064
120	10.00	0.73	0.256		0.191	(	0.231)		0.065
121	10.08	0.50	0.175	(	0.191)		0.157		0.017
122	10.17	0.50	0.175	(	0.190)		0.157		0.017
123	10.25	0.50	0.175	(	0.189)		0.157		0.017
124	10.33	0.50	0.175	(	0.188)		0.157		0.017
125	10.42	0.50	0.175	(	0.187)		0.157		0.017
126	10.50	0.50	0.175	(	0.186)		0.157		0.017
127	10.58	0.67	0.233		0.185	(	0.210)		0.048
128	10.67	0.67	0.233		0.184	(	0.210)		0.049
129	10.75	0.67	0.233		0.183	(	0.210)		0.050
130	10.83	0.67	0.233		0.182	(	0.210)		0.051
131	10.92	0.67	0.233		0.181	(	0.210)		0.051
132	11.00	0.67	0.233		0.181	(	0.210)		0.052
133	11.08	0.63	0.221		0.180	(	0.199)		0.042
134	11.17	0.63	0.221		0.179	(	0.199)		0.042
135	11.25	0.63	0.221		0.178	(	0.199)		0.043
136	11.33	0.63	0.221		0.177	(	0.199)		0.044
137	11.42	0.63	0.221		0.176	(	0.199)		0.045
138	11.50	0.63	0.221		0.175	(	0.199)		0.046
139	11.58	0.57	0.198		0.174	(	0.178)		0.024
140	11.67	0.57	0.198		0.174	(	0.178)		0.024
141	11.75	0.57	0.198		0.173	(	0.178)		0.025
142	11.83	0.60	0.210		0.172	(	0.189)		0.038
143	11.92	0.60	0.210		0.171	(	0.189)		0.039

144	12.00	0.60	0.210		0.170	(	0.189)	0.039
145	12.08	0.83	0.291		0.169	(	0.262)	0.122
146	12.17	0.83	0.291		0.168	(	0.262)	0.123
147	12.25	0.83	0.291		0.168	(	0.262)	0.124
148	12.33	0.87	0.303		0.167	(	0.272)	0.136
149	12.42	0.87	0.303		0.166	(	0.272)	0.137
150	12.50	0.87	0.303		0.165	(	0.272)	0.138
151	12.58	0.93	0.326		0.164	(	0.293)	0.162
152	12.67	0.93	0.326		0.163	(	0.293)	0.163
153	12.75	0.93	0.326		0.163	(	0.293)	0.163
154	12.83	0.97	0.338		0.162	(	0.304)	0.176
155	12.92	0.97	0.338		0.161	(	0.304)	0.177
156	13.00	0.97	0.338		0.160	(	0.304)	0.178
157	13.08	1.13	0.396		0.159	(	0.356)	0.237
158	13.17	1.13	0.396		0.158	(	0.356)	0.237
159	13.25	1.13	0.396		0.158	(	0.356)	0.238
160	13.33	1.13	0.396		0.157	(	0.356)	0.239
161	13.42	1.13	0.396		0.156	(	0.356)	0.240
162	13.50	1.13	0.396		0.155	(	0.356)	0.241
163	13.58	0.77	0.268		0.154	(	0.241)	0.113
164	13.67	0.77	0.268		0.154	(	0.241)	0.114
165	13.75	0.77	0.268		0.153	(	0.241)	0.115
166	13.83	0.77	0.268		0.152	(	0.241)	0.116
167	13.92	0.77	0.268		0.151	(	0.241)	0.116
168	14.00	0.77	0.268		0.151	(	0.241)	0.117
169	14.08	0.90	0.314		0.150	(	0.283)	0.165
170	14.17	0.90	0.314		0.149	(	0.283)	0.165
171	14.25	0.90	0.314		0.148	(	0.283)	0.166
172	14.33	0.87	0.303		0.148	(	0.272)	0.155
173	14.42	0.87	0.303		0.147	(	0.272)	0.156
174	14.50	0.87	0.303		0.146	(	0.272)	0.157
175	14.58	0.87	0.303		0.145	(	0.272)	0.157
176	14.67	0.87	0.303		0.145	(	0.272)	0.158
177	14.75	0.87	0.303		0.144	(	0.272)	0.159
178	14.83	0.83	0.291		0.143	(	0.262)	0.148
179	14.92	0.83	0.291		0.142	(	0.262)	0.149
180	15.00	0.83	0.291		0.142	(	0.262)	0.149
181	15.08	0.80	0.279		0.141	(	0.251)	0.139
182	15.17	0.80	0.279		0.140	(	0.251)	0.139
183	15.25	0.80	0.279		0.139	(	0.251)	0.140
184	15.33	0.77	0.268		0.139	(	0.241)	0.129
185	15.42	0.77	0.268		0.138	(	0.241)	0.130
186	15.50	0.77	0.268		0.137	(	0.241)	0.130
187	15.58	0.63	0.221		0.137	(	0.199)	0.085
188	15.67	0.63	0.221		0.136	(	0.199)	0.085
189	15.75	0.63	0.221		0.135	(	0.199)	0.086
190	15.83	0.63	0.221		0.135	(	0.199)	0.087
191	15.92	0.63	0.221		0.134	(	0.199)	0.087
192	16.00	0.63	0.221		0.133	(	0.199)	0.088
193	16.08	0.13	0.047	(	0.132)		0.042	0.005
194	16.17	0.13	0.047	(	0.132)		0.042	0.005
195	16.25	0.13	0.047	(	0.131)		0.042	0.005
196	16.33	0.13	0.047	(	0.130)		0.042	0.005
197	16.42	0.13	0.047	(	0.130)		0.042	0.005
198	16.50	0.13	0.047	(	0.129)		0.042	0.005
199	16.58	0.10	0.035	(	0.128)		0.031	0.003
200	16.67	0.10	0.035	(	0.128)		0.031	0.003
201	16.75	0.10	0.035	(	0.127)		0.031	0.003
202	16.83	0.10	0.035	(	0.127)		0.031	0.003
203	16.92	0.10	0.035	(	0.126)		0.031	0.003
204	17.00	0.10	0.035	(	0.125)		0.031	0.003
205	17.08	0.17	0.058	(	0.125)		0.052	0.006
206	17.17	0.17	0.058	(	0.124)		0.052	0.006

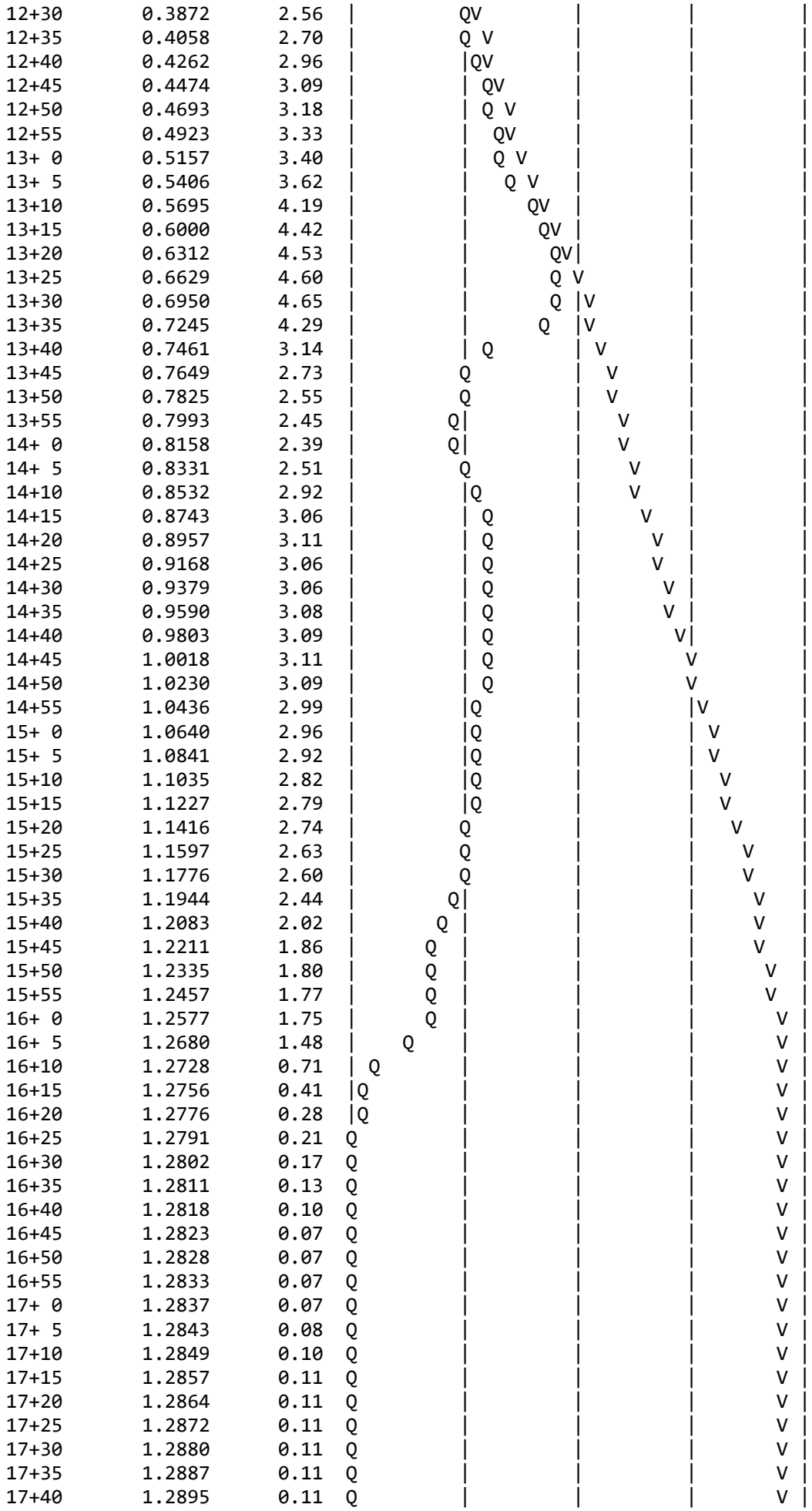
207	17.25	0.17	0.058	(0.123)	0.052	0.006
208	17.33	0.17	0.058	(0.123)	0.052	0.006
209	17.42	0.17	0.058	(0.122)	0.052	0.006
210	17.50	0.17	0.058	(0.122)	0.052	0.006
211	17.58	0.17	0.058	(0.121)	0.052	0.006
212	17.67	0.17	0.058	(0.120)	0.052	0.006
213	17.75	0.17	0.058	(0.120)	0.052	0.006
214	17.83	0.13	0.047	(0.119)	0.042	0.005
215	17.92	0.13	0.047	(0.119)	0.042	0.005
216	18.00	0.13	0.047	(0.118)	0.042	0.005
217	18.08	0.13	0.047	(0.117)	0.042	0.005
218	18.17	0.13	0.047	(0.117)	0.042	0.005
219	18.25	0.13	0.047	(0.116)	0.042	0.005
220	18.33	0.13	0.047	(0.116)	0.042	0.005
221	18.42	0.13	0.047	(0.115)	0.042	0.005
222	18.50	0.13	0.047	(0.115)	0.042	0.005
223	18.58	0.10	0.035	(0.114)	0.031	0.003
224	18.67	0.10	0.035	(0.113)	0.031	0.003
225	18.75	0.10	0.035	(0.113)	0.031	0.003
226	18.83	0.07	0.023	(0.112)	0.021	0.002
227	18.92	0.07	0.023	(0.112)	0.021	0.002
228	19.00	0.07	0.023	(0.111)	0.021	0.002
229	19.08	0.10	0.035	(0.111)	0.031	0.003
230	19.17	0.10	0.035	(0.110)	0.031	0.003
231	19.25	0.10	0.035	(0.110)	0.031	0.003
232	19.33	0.13	0.047	(0.109)	0.042	0.005
233	19.42	0.13	0.047	(0.109)	0.042	0.005
234	19.50	0.13	0.047	(0.108)	0.042	0.005
235	19.58	0.10	0.035	(0.108)	0.031	0.003
236	19.67	0.10	0.035	(0.107)	0.031	0.003
237	19.75	0.10	0.035	(0.107)	0.031	0.003
238	19.83	0.07	0.023	(0.106)	0.021	0.002
239	19.92	0.07	0.023	(0.106)	0.021	0.002
240	20.00	0.07	0.023	(0.105)	0.021	0.002
241	20.08	0.10	0.035	(0.105)	0.031	0.003
242	20.17	0.10	0.035	(0.104)	0.031	0.003
243	20.25	0.10	0.035	(0.104)	0.031	0.003
244	20.33	0.10	0.035	(0.103)	0.031	0.003
245	20.42	0.10	0.035	(0.103)	0.031	0.003
246	20.50	0.10	0.035	(0.103)	0.031	0.003
247	20.58	0.10	0.035	(0.102)	0.031	0.003
248	20.67	0.10	0.035	(0.102)	0.031	0.003
249	20.75	0.10	0.035	(0.101)	0.031	0.003
250	20.83	0.07	0.023	(0.101)	0.021	0.002
251	20.92	0.07	0.023	(0.100)	0.021	0.002
252	21.00	0.07	0.023	(0.100)	0.021	0.002
253	21.08	0.10	0.035	(0.100)	0.031	0.003
254	21.17	0.10	0.035	(0.099)	0.031	0.003
255	21.25	0.10	0.035	(0.099)	0.031	0.003
256	21.33	0.07	0.023	(0.099)	0.021	0.002
257	21.42	0.07	0.023	(0.098)	0.021	0.002
258	21.50	0.07	0.023	(0.098)	0.021	0.002
259	21.58	0.10	0.035	(0.097)	0.031	0.003
260	21.67	0.10	0.035	(0.097)	0.031	0.003
261	21.75	0.10	0.035	(0.097)	0.031	0.003
262	21.83	0.07	0.023	(0.096)	0.021	0.002
263	21.92	0.07	0.023	(0.096)	0.021	0.002
264	22.00	0.07	0.023	(0.096)	0.021	0.002
265	22.08	0.10	0.035	(0.095)	0.031	0.003
266	22.17	0.10	0.035	(0.095)	0.031	0.003
267	22.25	0.10	0.035	(0.095)	0.031	0.003
268	22.33	0.07	0.023	(0.095)	0.021	0.002
269	22.42	0.07	0.023	(0.094)	0.021	0.002

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270  22.50     0.07      0.023       (  0.094)       0.021        0.002
271  22.58     0.07      0.023       (  0.094)       0.021        0.002
272  22.67     0.07      0.023       (  0.093)       0.021        0.002
273  22.75     0.07      0.023       (  0.093)       0.021        0.002
274  22.83     0.07      0.023       (  0.093)       0.021        0.002
275  22.92     0.07      0.023       (  0.093)       0.021        0.002
276  23.00     0.07      0.023       (  0.092)       0.021        0.002
277  23.08     0.07      0.023       (  0.092)       0.021        0.002
278  23.17     0.07      0.023       (  0.092)       0.021        0.002
279  23.25     0.07      0.023       (  0.092)       0.021        0.002
280  23.33     0.07      0.023       (  0.092)       0.021        0.002
281  23.42     0.07      0.023       (  0.091)       0.021        0.002
282  23.50     0.07      0.023       (  0.091)       0.021        0.002
283  23.58     0.07      0.023       (  0.091)       0.021        0.002
284  23.67     0.07      0.023       (  0.091)       0.021        0.002
285  23.75     0.07      0.023       (  0.091)       0.021        0.002
286  23.83     0.07      0.023       (  0.091)       0.021        0.002
287  23.92     0.07      0.023       (  0.091)       0.021        0.002
288  24.00     0.07      0.023       (  0.091)       0.021        0.002
                (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     9.8
       Flood volume = Effective rainfall      0.81(In)
        times area      19.5(Ac.)/[(In)/(Ft.)] =       1.3(Ac.Ft)
       Total soil loss =      2.10(In)
       Total soil loss =     3.409(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =       57644.8 Cubic Feet
       Total soil loss =      148494.1 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      4.654(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0001      0.01  Q         |         |         |         |
   0+10       0.0002      0.03  Q         |         |         |         |
   0+15       0.0005      0.04  Q         |         |         |         |
   0+20       0.0008      0.04  Q         |         |         |         |
   0+25       0.0012      0.06  Q         |         |         |         |
   0+30       0.0016      0.06  Q         |         |         |         |
   0+35       0.0021      0.06  Q         |         |         |         |
   0+40       0.0025      0.07  Q         |         |         |         |
   0+45       0.0030      0.07  Q         |         |         |         |
   0+50       0.0035      0.07  Q         |         |         |         |
   0+55       0.0041      0.08  Q         |         |         |         |
   1+ 0       0.0047      0.09  Q         |         |         |         |
   1+ 5       0.0052      0.09  Q         |         |         |         |
   1+10       0.0058      0.08  Q         |         |         |         |
   1+15       0.0063      0.07  Q         |         |         |         |
   1+20       0.0068      0.07  Q         |         |         |         |
   1+25       0.0072      0.07  Q         |         |         |         |
   1+30       0.0077      0.07  Q         |         |         |         |
   1+35       0.0082      0.07  Q         |         |         |         |
   1+40       0.0087      0.07  Q         |         |         |         |
   1+45       0.0091      0.07  Q         |         |         |         |
   1+50       0.0096      0.07  Q         |         |         |         |
   1+55       0.0102      0.08  Q         |         |         |         |
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2+ 0	0.0108	0.09	Q				
2+ 5	0.0114	0.09	Q				
2+10	0.0120	0.09	Q				
2+15	0.0127	0.09	Q				
2+20	0.0133	0.09	Q				
2+25	0.0139	0.09	Q				
2+30	0.0146	0.09	Q				
2+35	0.0152	0.10	Q				
2+40	0.0159	0.11	Q				
2+45	0.0167	0.11	Q				
2+50	0.0175	0.11	Q				
2+55	0.0182	0.11	Q				
3+ 0	0.0190	0.11	Q				
3+ 5	0.0198	0.11	Q				
3+10	0.0206	0.11	Q				
3+15	0.0214	0.11	Q				
3+20	0.0222	0.11	Q				
3+25	0.0230	0.11	Q				
3+30	0.0238	0.11	Q				
3+35	0.0245	0.11	Q				
3+40	0.0253	0.11	Q				
3+45	0.0261	0.11	Q				
3+50	0.0269	0.12	Q				
3+55	0.0278	0.13	Q				
4+ 0	0.0287	0.13	Q				
4+ 5	0.0297	0.13	Q				
4+10	0.0306	0.14	Q				
4+15	0.0315	0.14	Q				
4+20	0.0325	0.14	Q				
4+25	0.0335	0.15	QV				
4+30	0.0346	0.16	QV				
4+35	0.0357	0.16	QV				
4+40	0.0368	0.16	QV				
4+45	0.0379	0.16	QV				
4+50	0.0390	0.16	QV				
4+55	0.0402	0.17	QV				
5+ 0	0.0415	0.18	QV				
5+ 5	0.0426	0.17	QV				
5+10	0.0437	0.15	QV				
5+15	0.0447	0.15	QV				
5+20	0.0457	0.15	QV				
5+25	0.0468	0.15	QV				
5+30	0.0479	0.16	QV				
5+35	0.0490	0.16	QV				
5+40	0.0502	0.17	QV				
5+45	0.0514	0.18	QV				
5+50	0.0526	0.18	QV				
5+55	0.0539	0.18	QV				
6+ 0	0.0551	0.18	QV				
6+ 5	0.0564	0.19	QV				
6+10	0.0578	0.20	QV				
6+15	0.0592	0.20	QV				
6+20	0.0606	0.20	QV				
6+25	0.0620	0.20	QV				
6+30	0.0634	0.21	QV				
6+35	0.0648	0.21	QV				
6+40	0.0664	0.22	Q V				
6+45	0.0679	0.22	Q V				
6+50	0.0695	0.23	Q V				
6+55	0.0710	0.23	Q V				
7+ 0	0.0726	0.23	Q V				
7+ 5	0.0742	0.23	Q V				
7+10	0.0757	0.23	Q V				

7+15	0.0773	0.23	Q V	|	|	|	|
7+20	0.0789	0.23	Q V	|	|	|	|
7+25	0.0806	0.24	Q V	|	|	|	|
7+30	0.0823	0.25	Q V	|	|	|	|
7+35	0.0840	0.25	|QV	|	|	|	|
7+40	0.0859	0.26	|QV	|	|	|	|
7+45	0.0877	0.27	|QV	|	|	|	|
7+50	0.0896	0.28	|QV	|	|	|	|
7+55	0.0916	0.29	|QV	|	|	|	|
8+ 0	0.0936	0.29	|QV	|	|	|	|
8+ 5	0.0957	0.30	|QV	|	|	|	|
8+10	0.0979	0.32	|QV	|	|	|	|
8+15	0.1002	0.33	|Q V	|	|	|	|
8+20	0.1025	0.34	|Q V	|	|	|	|
8+25	0.1049	0.34	|Q V	|	|	|	|
8+30	0.1072	0.34	|Q V	|	|	|	|
8+35	0.1096	0.35	|Q V	|	|	|	|
8+40	0.1121	0.36	|Q V	|	|	|	|
8+45	0.1146	0.36	|Q V	|	|	|	|
8+50	0.1171	0.37	|Q V	|	|	|	|
8+55	0.1197	0.38	|Q V	|	|	|	|
9+ 0	0.1224	0.38	|Q V	|	|	|	|
9+ 5	0.1251	0.39	|Q V	|	|	|	|
9+10	0.1279	0.42	|Q V	|	|	|	|
9+15	0.1309	0.43	|Q V	|	|	|	|
9+20	0.1341	0.47	|Q V	|	|	|	|
9+25	0.1381	0.58	| Q V	|	|	|	|
9+30	0.1424	0.63	| Q V	|	|	|	|
9+35	0.1473	0.70	| Q V	|	|	|	|
9+40	0.1531	0.84	| QV	|	|	|	|
9+45	0.1593	0.90	| QV	|	|	|	|
9+50	0.1660	0.98	| Q V	|	|	|	|
9+55	0.1737	1.12	| QV	|	|	|	|
10+ 0	0.1819	1.19	| QV	|	|	|	|
10+ 5	0.1893	1.08	| QV	|	|	|	|
10+10	0.1939	0.66	| Q V	|	|	|	|
10+15	0.1974	0.51	| Q V	|	|	|	|
10+20	0.2004	0.44	|Q V	|	|	|	|
10+25	0.2032	0.41	|Q V	|	|	|	|
10+30	0.2059	0.39	|Q V	|	|	|	|
10+35	0.2091	0.46	|Q V	|	|	|	|
10+40	0.2141	0.73	| Q V	|	|	|	|
10+45	0.2199	0.84	| Q V	|	|	|	|
10+50	0.2261	0.90	| Q V	|	|	|	|
10+55	0.2326	0.94	| Q V	|	|	|	|
11+ 0	0.2393	0.97	| Q V	|	|	|	|
11+ 5	0.2459	0.97	| Q V	|	|	|	|
11+10	0.2520	0.88	| Q V	|	|	|	|
11+15	0.2580	0.87	| Q V	|	|	|	|
11+20	0.2640	0.87	| Q V	|	|	|	|
11+25	0.2700	0.87	| Q V |	|	|	|
11+30	0.2761	0.89	| Q V |	|	|	|
11+35	0.2818	0.83	| Q V |	|	|	|
11+40	0.2861	0.62	| Q V |	|	|	|
11+45	0.2899	0.56	| Q V |	|	|	|
11+50	0.2939	0.58	| Q V |	|	|	|
11+55	0.2986	0.68	| Q V|	|	|	|
12+ 0	0.3035	0.72	| Q V|	|	|	|
12+ 5	0.3105	1.01	| Q V|	|	|	|
12+10	0.3227	1.78	| Q V|	|	|	|
12+15	0.3370	2.08	| Q V	|	|	|
12+20	0.3526	2.26	| QV	|	|	|
12+25	0.3695	2.46	| Q|V	|	|	|



12+30	0.3872	2.56	QV			
12+35	0.4058	2.70	Q V			
12+40	0.4262	2.96	QV			
12+45	0.4474	3.09	QV			
12+50	0.4693	3.18	Q V			
12+55	0.4923	3.33	QV			
13+ 0	0.5157	3.40	Q V			
13+ 5	0.5406	3.62	Q V			
13+10	0.5695	4.19	QV			
13+15	0.6000	4.42	QV			
13+20	0.6312	4.53	QV			
13+25	0.6629	4.60	Q V			
13+30	0.6950	4.65	Q V			
13+35	0.7245	4.29	Q V			
13+40	0.7461	3.14	Q V			
13+45	0.7649	2.73	Q V			
13+50	0.7825	2.55	Q V			
13+55	0.7993	2.45	Q V			
14+ 0	0.8158	2.39	Q V			
14+ 5	0.8331	2.51	Q V			
14+10	0.8532	2.92	Q V			
14+15	0.8743	3.06	Q V			
14+20	0.8957	3.11	Q V			
14+25	0.9168	3.06	Q V			
14+30	0.9379	3.06	Q V			
14+35	0.9590	3.08	Q V			
14+40	0.9803	3.09	Q V			
14+45	1.0018	3.11	Q V			
14+50	1.0230	3.09	Q V			
14+55	1.0436	2.99	Q V			
15+ 0	1.0640	2.96	Q V			
15+ 5	1.0841	2.92	Q V			
15+10	1.1035	2.82	Q V			
15+15	1.1227	2.79	Q V			
15+20	1.1416	2.74	Q V			
15+25	1.1597	2.63	Q V			
15+30	1.1776	2.60	Q V			
15+35	1.1944	2.44	Q V			
15+40	1.2083	2.02	Q V			
15+45	1.2211	1.86	Q V			
15+50	1.2335	1.80	Q V			
15+55	1.2457	1.77	Q V			
16+ 0	1.2577	1.75	Q V			
16+ 5	1.2680	1.48	Q V			
16+10	1.2728	0.71	Q V			
16+15	1.2756	0.41	Q V			
16+20	1.2776	0.28	Q V			
16+25	1.2791	0.21	Q V			
16+30	1.2802	0.17	Q V			
16+35	1.2811	0.13	Q V			
16+40	1.2818	0.10	Q V			
16+45	1.2823	0.07	Q V			
16+50	1.2828	0.07	Q V			
16+55	1.2833	0.07	Q V			
17+ 0	1.2837	0.07	Q V			
17+ 5	1.2843	0.08	Q V			
17+10	1.2849	0.10	Q V			
17+15	1.2857	0.11	Q V			
17+20	1.2864	0.11	Q V			
17+25	1.2872	0.11	Q V			
17+30	1.2880	0.11	Q V			
17+35	1.2887	0.11	Q V			
17+40	1.2895	0.11	Q V			

17+45	1.2903	0.11	Q	|	|	|	V|
17+50	1.2911	0.11	Q	|	|	|	V|
17+55	1.2918	0.10	Q	|	|	|	V|
18+ 0	1.2924	0.10	Q	|	|	|	V|
18+ 5	1.2931	0.09	Q	|	|	|	V|
18+10	1.2937	0.09	Q	|	|	|	V|
18+15	1.2944	0.09	Q	|	|	|	V|
18+20	1.2950	0.09	Q	|	|	|	V|
18+25	1.2956	0.09	Q	|	|	|	V|
18+30	1.2963	0.09	Q	|	|	|	V|
18+35	1.2969	0.09	Q	|	|	|	V|
18+40	1.2974	0.08	Q	|	|	|	V|
18+45	1.2979	0.07	Q	|	|	|	V|
18+50	1.2984	0.07	Q	|	|	|	V|
18+55	1.2987	0.06	Q	|	|	|	V|
19+ 0	1.2991	0.05	Q	|	|	|	V|
19+ 5	1.2995	0.05	Q	|	|	|	V|
19+10	1.2999	0.06	Q	|	|	|	V|
19+15	1.3003	0.07	Q	|	|	|	V|
19+20	1.3008	0.07	Q	|	|	|	V|
19+25	1.3014	0.08	Q	|	|	|	V|
19+30	1.3020	0.09	Q	|	|	|	V|
19+35	1.3026	0.08	Q	|	|	|	V|
19+40	1.3031	0.08	Q	|	|	|	V|
19+45	1.3036	0.07	Q	|	|	|	V|
19+50	1.3040	0.07	Q	|	|	|	V|
19+55	1.3044	0.06	Q	|	|	|	V|
20+ 0	1.3048	0.05	Q	|	|	|	V|
20+ 5	1.3051	0.05	Q	|	|	|	V|
20+10	1.3056	0.06	Q	|	|	|	V|
20+15	1.3060	0.07	Q	|	|	|	V|
20+20	1.3065	0.07	Q	|	|	|	V|
20+25	1.3069	0.07	Q	|	|	|	V|
20+30	1.3074	0.07	Q	|	|	|	V|
20+35	1.3079	0.07	Q	|	|	|	V|
20+40	1.3083	0.07	Q	|	|	|	V|
20+45	1.3088	0.07	Q	|	|	|	V|
20+50	1.3093	0.07	Q	|	|	|	V|
20+55	1.3096	0.05	Q	|	|	|	V|
21+ 0	1.3100	0.05	Q	|	|	|	V|
21+ 5	1.3103	0.05	Q	|	|	|	V|
21+10	1.3108	0.06	Q	|	|	|	V|
21+15	1.3112	0.07	Q	|	|	|	V|
21+20	1.3117	0.06	Q	|	|	|	V|
21+25	1.3120	0.05	Q	|	|	|	V|
21+30	1.3124	0.05	Q	|	|	|	V|
21+35	1.3127	0.05	Q	|	|	|	V|
21+40	1.3131	0.06	Q	|	|	|	V|
21+45	1.3136	0.07	Q	|	|	|	V|
21+50	1.3140	0.06	Q	|	|	|	V|
21+55	1.3144	0.05	Q	|	|	|	V|
22+ 0	1.3147	0.05	Q	|	|	|	V|
22+ 5	1.3151	0.05	Q	|	|	|	V|
22+10	1.3155	0.06	Q	|	|	|	V|
22+15	1.3160	0.07	Q	|	|	|	V|
22+20	1.3164	0.06	Q	|	|	|	V|
22+25	1.3168	0.05	Q	|	|	|	V|
22+30	1.3171	0.05	Q	|	|	|	V|
22+35	1.3174	0.05	Q	|	|	|	V|
22+40	1.3177	0.05	Q	|	|	|	V|
22+45	1.3181	0.05	Q	|	|	|	V|
22+50	1.3184	0.05	Q	|	|	|	V|
22+55	1.3187	0.05	Q	|	|	|	V|

23+ 0	1.3190	0.05	Q	|	|	|	V|
23+ 5	1.3193	0.05	Q	|	|	|	V|
23+10	1.3197	0.05	Q	|	|	|	V|
23+15	1.3200	0.05	Q	|	|	|	V|
23+20	1.3203	0.05	Q	|	|	|	V|
23+25	1.3206	0.05	Q	|	|	|	V|
23+30	1.3209	0.05	Q	|	|	|	V|
23+35	1.3212	0.05	Q	|	|	|	V|
23+40	1.3215	0.05	Q	|	|	|	V|
23+45	1.3219	0.05	Q	|	|	|	V|
23+50	1.3222	0.05	Q	|	|	|	V|
23+55	1.3225	0.05	Q	|	|	|	V|
24+ 0	1.3228	0.05	Q	|	|	|	V|
24+ 5	1.3231	0.04	Q	|	|	|	V|
24+10	1.3232	0.02	Q	|	|	|	V|
24+15	1.3233	0.01	Q	|	|	|	V|
24+20	1.3233	0.01	Q	|	|	|	V|
24+25	1.3233	0.00	Q	|	|	|	V|
24+30	1.3233	0.00	Q	|	|	|	V|
24+35	1.3233	0.00	Q	|	|	|	V|
24+40	1.3233	0.00	Q	|	|	|	V|

C.3 – EXISTING UNIT HYDROGRAPH ANALYSIS, AREA “XC”

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

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Study date 07/10/25 File: xc242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 "TRES CERRITOS" PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
EXISTING AREA "XC" (VERNAL POOL)
2-YEAR
24-HOUR

Drainage Area = 40.56(Ac.) = 0.063 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 40.56(Ac.) = 0.063 Sq. Mi.
Length along longest watercourse = 3189.00(Ft.)
Length along longest watercourse measured to centroid = 1921.00(Ft.)
Length along longest watercourse = 0.604 Mi.
Length along longest watercourse measured to centroid = 0.364 Mi.
Difference in elevation = 419.70(Ft.)
Slope along watercourse = 694.8937 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.117 Hr.
Lag time = 7.01 Min.
25% of lag time = 1.75 Min.
40% of lag time = 2.80 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
40.56	1.80	73.01

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
40.56	4.50	182.52

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
40.560	77.00	0.000

Total Area Entered = 40.56(Ac.)

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

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

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

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	71.371	10.978	4.487
2	0.167	142.743	40.801	16.678
3	0.250	214.114	22.679	9.270
4	0.333	285.485	8.888	3.633
5	0.417	356.856	5.402	2.208
6	0.500	428.228	3.558	1.454
7	0.583	499.599	2.406	0.983
8	0.667	570.970	1.853	0.758
9	0.750	642.341	1.306	0.534
10	0.833	713.713	0.909	0.372
11	0.917	785.084	0.715	0.292
12	1.000	856.455	0.506	0.207
		Sum = 100.000	Sum=	40.877

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.844)	0.013	0.001
2	0.17	0.07	0.014	(0.841)	0.013	0.001
3	0.25	0.07	0.014	(0.838)	0.013	0.001
4	0.33	0.10	0.022	(0.834)	0.019	0.002
5	0.42	0.10	0.022	(0.831)	0.019	0.002
6	0.50	0.10	0.022	(0.828)	0.019	0.002
7	0.58	0.10	0.022	(0.825)	0.019	0.002
8	0.67	0.10	0.022	(0.821)	0.019	0.002
9	0.75	0.10	0.022	(0.818)	0.019	0.002
10	0.83	0.13	0.029	(0.815)	0.026	0.003
11	0.92	0.13	0.029	(0.812)	0.026	0.003
12	1.00	0.13	0.029	(0.808)	0.026	0.003
13	1.08	0.10	0.022	(0.805)	0.019	0.002
14	1.17	0.10	0.022	(0.802)	0.019	0.002

15	1.25	0.10	0.022	(0.799)	0.019	0.002
16	1.33	0.10	0.022	(0.796)	0.019	0.002
17	1.42	0.10	0.022	(0.793)	0.019	0.002
18	1.50	0.10	0.022	(0.789)	0.019	0.002
19	1.58	0.10	0.022	(0.786)	0.019	0.002
20	1.67	0.10	0.022	(0.783)	0.019	0.002
21	1.75	0.10	0.022	(0.780)	0.019	0.002
22	1.83	0.13	0.029	(0.777)	0.026	0.003
23	1.92	0.13	0.029	(0.774)	0.026	0.003
24	2.00	0.13	0.029	(0.771)	0.026	0.003
25	2.08	0.13	0.029	(0.767)	0.026	0.003
26	2.17	0.13	0.029	(0.764)	0.026	0.003
27	2.25	0.13	0.029	(0.761)	0.026	0.003
28	2.33	0.13	0.029	(0.758)	0.026	0.003
29	2.42	0.13	0.029	(0.755)	0.026	0.003
30	2.50	0.13	0.029	(0.752)	0.026	0.003
31	2.58	0.17	0.036	(0.749)	0.032	0.004
32	2.67	0.17	0.036	(0.746)	0.032	0.004
33	2.75	0.17	0.036	(0.743)	0.032	0.004
34	2.83	0.17	0.036	(0.740)	0.032	0.004
35	2.92	0.17	0.036	(0.737)	0.032	0.004
36	3.00	0.17	0.036	(0.734)	0.032	0.004
37	3.08	0.17	0.036	(0.731)	0.032	0.004
38	3.17	0.17	0.036	(0.728)	0.032	0.004
39	3.25	0.17	0.036	(0.724)	0.032	0.004
40	3.33	0.17	0.036	(0.721)	0.032	0.004
41	3.42	0.17	0.036	(0.718)	0.032	0.004
42	3.50	0.17	0.036	(0.715)	0.032	0.004
43	3.58	0.17	0.036	(0.712)	0.032	0.004
44	3.67	0.17	0.036	(0.709)	0.032	0.004
45	3.75	0.17	0.036	(0.706)	0.032	0.004
46	3.83	0.20	0.043	(0.704)	0.039	0.004
47	3.92	0.20	0.043	(0.701)	0.039	0.004
48	4.00	0.20	0.043	(0.698)	0.039	0.004
49	4.08	0.20	0.043	(0.695)	0.039	0.004
50	4.17	0.20	0.043	(0.692)	0.039	0.004
51	4.25	0.20	0.043	(0.689)	0.039	0.004
52	4.33	0.23	0.050	(0.686)	0.045	0.005
53	4.42	0.23	0.050	(0.683)	0.045	0.005
54	4.50	0.23	0.050	(0.680)	0.045	0.005
55	4.58	0.23	0.050	(0.677)	0.045	0.005
56	4.67	0.23	0.050	(0.674)	0.045	0.005
57	4.75	0.23	0.050	(0.671)	0.045	0.005
58	4.83	0.27	0.058	(0.668)	0.052	0.006
59	4.92	0.27	0.058	(0.665)	0.052	0.006
60	5.00	0.27	0.058	(0.663)	0.052	0.006
61	5.08	0.20	0.043	(0.660)	0.039	0.004
62	5.17	0.20	0.043	(0.657)	0.039	0.004
63	5.25	0.20	0.043	(0.654)	0.039	0.004
64	5.33	0.23	0.050	(0.651)	0.045	0.005
65	5.42	0.23	0.050	(0.648)	0.045	0.005
66	5.50	0.23	0.050	(0.645)	0.045	0.005
67	5.58	0.27	0.058	(0.643)	0.052	0.006
68	5.67	0.27	0.058	(0.640)	0.052	0.006
69	5.75	0.27	0.058	(0.637)	0.052	0.006
70	5.83	0.27	0.058	(0.634)	0.052	0.006
71	5.92	0.27	0.058	(0.631)	0.052	0.006
72	6.00	0.27	0.058	(0.628)	0.052	0.006
73	6.08	0.30	0.065	(0.626)	0.058	0.006
74	6.17	0.30	0.065	(0.623)	0.058	0.006
75	6.25	0.30	0.065	(0.620)	0.058	0.006
76	6.33	0.30	0.065	(0.617)	0.058	0.006
77	6.42	0.30	0.065	(0.615)	0.058	0.006

78	6.50	0.30	0.065	(0.612)	0.058	0.006
79	6.58	0.33	0.072	(0.609)	0.065	0.007
80	6.67	0.33	0.072	(0.606)	0.065	0.007
81	6.75	0.33	0.072	(0.604)	0.065	0.007
82	6.83	0.33	0.072	(0.601)	0.065	0.007
83	6.92	0.33	0.072	(0.598)	0.065	0.007
84	7.00	0.33	0.072	(0.595)	0.065	0.007
85	7.08	0.33	0.072	(0.593)	0.065	0.007
86	7.17	0.33	0.072	(0.590)	0.065	0.007
87	7.25	0.33	0.072	(0.587)	0.065	0.007
88	7.33	0.37	0.079	(0.585)	0.071	0.008
89	7.42	0.37	0.079	(0.582)	0.071	0.008
90	7.50	0.37	0.079	(0.579)	0.071	0.008
91	7.58	0.40	0.086	(0.577)	0.078	0.009
92	7.67	0.40	0.086	(0.574)	0.078	0.009
93	7.75	0.40	0.086	(0.571)	0.078	0.009
94	7.83	0.43	0.094	(0.569)	0.084	0.009
95	7.92	0.43	0.094	(0.566)	0.084	0.009
96	8.00	0.43	0.094	(0.563)	0.084	0.009
97	8.08	0.50	0.108	(0.561)	0.097	0.011
98	8.17	0.50	0.108	(0.558)	0.097	0.011
99	8.25	0.50	0.108	(0.556)	0.097	0.011
100	8.33	0.50	0.108	(0.553)	0.097	0.011
101	8.42	0.50	0.108	(0.550)	0.097	0.011
102	8.50	0.50	0.108	(0.548)	0.097	0.011
103	8.58	0.53	0.115	(0.545)	0.104	0.012
104	8.67	0.53	0.115	(0.543)	0.104	0.012
105	8.75	0.53	0.115	(0.540)	0.104	0.012
106	8.83	0.57	0.122	(0.538)	0.110	0.012
107	8.92	0.57	0.122	(0.535)	0.110	0.012
108	9.00	0.57	0.122	(0.533)	0.110	0.012
109	9.08	0.63	0.137	(0.530)	0.123	0.014
110	9.17	0.63	0.137	(0.528)	0.123	0.014
111	9.25	0.63	0.137	(0.525)	0.123	0.014
112	9.33	0.67	0.144	(0.523)	0.130	0.014
113	9.42	0.67	0.144	(0.520)	0.130	0.014
114	9.50	0.67	0.144	(0.518)	0.130	0.014
115	9.58	0.70	0.151	(0.515)	0.136	0.015
116	9.67	0.70	0.151	(0.513)	0.136	0.015
117	9.75	0.70	0.151	(0.510)	0.136	0.015
118	9.83	0.73	0.158	(0.508)	0.143	0.016
119	9.92	0.73	0.158	(0.505)	0.143	0.016
120	10.00	0.73	0.158	(0.503)	0.143	0.016
121	10.08	0.50	0.108	(0.500)	0.097	0.011
122	10.17	0.50	0.108	(0.498)	0.097	0.011
123	10.25	0.50	0.108	(0.496)	0.097	0.011
124	10.33	0.50	0.108	(0.493)	0.097	0.011
125	10.42	0.50	0.108	(0.491)	0.097	0.011
126	10.50	0.50	0.108	(0.488)	0.097	0.011
127	10.58	0.67	0.144	(0.486)	0.130	0.014
128	10.67	0.67	0.144	(0.484)	0.130	0.014
129	10.75	0.67	0.144	(0.481)	0.130	0.014
130	10.83	0.67	0.144	(0.479)	0.130	0.014
131	10.92	0.67	0.144	(0.476)	0.130	0.014
132	11.00	0.67	0.144	(0.474)	0.130	0.014
133	11.08	0.63	0.137	(0.472)	0.123	0.014
134	11.17	0.63	0.137	(0.469)	0.123	0.014
135	11.25	0.63	0.137	(0.467)	0.123	0.014
136	11.33	0.63	0.137	(0.465)	0.123	0.014
137	11.42	0.63	0.137	(0.463)	0.123	0.014
138	11.50	0.63	0.137	(0.460)	0.123	0.014
139	11.58	0.57	0.122	(0.458)	0.110	0.012
140	11.67	0.57	0.122	(0.456)	0.110	0.012

141	11.75	0.57	0.122	(0.453)	0.110	0.012
142	11.83	0.60	0.130	(0.451)	0.117	0.013
143	11.92	0.60	0.130	(0.449)	0.117	0.013
144	12.00	0.60	0.130	(0.447)	0.117	0.013
145	12.08	0.83	0.180	(0.444)	0.162	0.018
146	12.17	0.83	0.180	(0.442)	0.162	0.018
147	12.25	0.83	0.180	(0.440)	0.162	0.018
148	12.33	0.87	0.187	(0.438)	0.168	0.019
149	12.42	0.87	0.187	(0.436)	0.168	0.019
150	12.50	0.87	0.187	(0.433)	0.168	0.019
151	12.58	0.93	0.202	(0.431)	0.181	0.020
152	12.67	0.93	0.202	(0.429)	0.181	0.020
153	12.75	0.93	0.202	(0.427)	0.181	0.020
154	12.83	0.97	0.209	(0.425)	0.188	0.021
155	12.92	0.97	0.209	(0.423)	0.188	0.021
156	13.00	0.97	0.209	(0.420)	0.188	0.021
157	13.08	1.13	0.245	(0.418)	0.220	0.024
158	13.17	1.13	0.245	(0.416)	0.220	0.024
159	13.25	1.13	0.245	(0.414)	0.220	0.024
160	13.33	1.13	0.245	(0.412)	0.220	0.024
161	13.42	1.13	0.245	(0.410)	0.220	0.024
162	13.50	1.13	0.245	(0.408)	0.220	0.024
163	13.58	0.77	0.166	(0.406)	0.149	0.017
164	13.67	0.77	0.166	(0.404)	0.149	0.017
165	13.75	0.77	0.166	(0.402)	0.149	0.017
166	13.83	0.77	0.166	(0.400)	0.149	0.017
167	13.92	0.77	0.166	(0.398)	0.149	0.017
168	14.00	0.77	0.166	(0.395)	0.149	0.017
169	14.08	0.90	0.194	(0.393)	0.175	0.019
170	14.17	0.90	0.194	(0.391)	0.175	0.019
171	14.25	0.90	0.194	(0.389)	0.175	0.019
172	14.33	0.87	0.187	(0.387)	0.168	0.019
173	14.42	0.87	0.187	(0.385)	0.168	0.019
174	14.50	0.87	0.187	(0.384)	0.168	0.019
175	14.58	0.87	0.187	(0.382)	0.168	0.019
176	14.67	0.87	0.187	(0.380)	0.168	0.019
177	14.75	0.87	0.187	(0.378)	0.168	0.019
178	14.83	0.83	0.180	(0.376)	0.162	0.018
179	14.92	0.83	0.180	(0.374)	0.162	0.018
180	15.00	0.83	0.180	(0.372)	0.162	0.018
181	15.08	0.80	0.173	(0.370)	0.156	0.017
182	15.17	0.80	0.173	(0.368)	0.156	0.017
183	15.25	0.80	0.173	(0.366)	0.156	0.017
184	15.33	0.77	0.166	(0.364)	0.149	0.017
185	15.42	0.77	0.166	(0.362)	0.149	0.017
186	15.50	0.77	0.166	(0.361)	0.149	0.017
187	15.58	0.63	0.137	(0.359)	0.123	0.014
188	15.67	0.63	0.137	(0.357)	0.123	0.014
189	15.75	0.63	0.137	(0.355)	0.123	0.014
190	15.83	0.63	0.137	(0.353)	0.123	0.014
191	15.92	0.63	0.137	(0.351)	0.123	0.014
192	16.00	0.63	0.137	(0.350)	0.123	0.014
193	16.08	0.13	0.029	(0.348)	0.026	0.003
194	16.17	0.13	0.029	(0.346)	0.026	0.003
195	16.25	0.13	0.029	(0.344)	0.026	0.003
196	16.33	0.13	0.029	(0.343)	0.026	0.003
197	16.42	0.13	0.029	(0.341)	0.026	0.003
198	16.50	0.13	0.029	(0.339)	0.026	0.003
199	16.58	0.10	0.022	(0.337)	0.019	0.002
200	16.67	0.10	0.022	(0.336)	0.019	0.002
201	16.75	0.10	0.022	(0.334)	0.019	0.002
202	16.83	0.10	0.022	(0.332)	0.019	0.002
203	16.92	0.10	0.022	(0.331)	0.019	0.002

204	17.00	0.10	0.022	(0.329)	0.019	0.002
205	17.08	0.17	0.036	(0.327)	0.032	0.004
206	17.17	0.17	0.036	(0.326)	0.032	0.004
207	17.25	0.17	0.036	(0.324)	0.032	0.004
208	17.33	0.17	0.036	(0.322)	0.032	0.004
209	17.42	0.17	0.036	(0.321)	0.032	0.004
210	17.50	0.17	0.036	(0.319)	0.032	0.004
211	17.58	0.17	0.036	(0.317)	0.032	0.004
212	17.67	0.17	0.036	(0.316)	0.032	0.004
213	17.75	0.17	0.036	(0.314)	0.032	0.004
214	17.83	0.13	0.029	(0.313)	0.026	0.003
215	17.92	0.13	0.029	(0.311)	0.026	0.003
216	18.00	0.13	0.029	(0.310)	0.026	0.003
217	18.08	0.13	0.029	(0.308)	0.026	0.003
218	18.17	0.13	0.029	(0.307)	0.026	0.003
219	18.25	0.13	0.029	(0.305)	0.026	0.003
220	18.33	0.13	0.029	(0.304)	0.026	0.003
221	18.42	0.13	0.029	(0.302)	0.026	0.003
222	18.50	0.13	0.029	(0.301)	0.026	0.003
223	18.58	0.10	0.022	(0.299)	0.019	0.002
224	18.67	0.10	0.022	(0.298)	0.019	0.002
225	18.75	0.10	0.022	(0.296)	0.019	0.002
226	18.83	0.07	0.014	(0.295)	0.013	0.001
227	18.92	0.07	0.014	(0.294)	0.013	0.001
228	19.00	0.07	0.014	(0.292)	0.013	0.001
229	19.08	0.10	0.022	(0.291)	0.019	0.002
230	19.17	0.10	0.022	(0.289)	0.019	0.002
231	19.25	0.10	0.022	(0.288)	0.019	0.002
232	19.33	0.13	0.029	(0.287)	0.026	0.003
233	19.42	0.13	0.029	(0.285)	0.026	0.003
234	19.50	0.13	0.029	(0.284)	0.026	0.003
235	19.58	0.10	0.022	(0.283)	0.019	0.002
236	19.67	0.10	0.022	(0.281)	0.019	0.002
237	19.75	0.10	0.022	(0.280)	0.019	0.002
238	19.83	0.07	0.014	(0.279)	0.013	0.001
239	19.92	0.07	0.014	(0.278)	0.013	0.001
240	20.00	0.07	0.014	(0.276)	0.013	0.001
241	20.08	0.10	0.022	(0.275)	0.019	0.002
242	20.17	0.10	0.022	(0.274)	0.019	0.002
243	20.25	0.10	0.022	(0.273)	0.019	0.002
244	20.33	0.10	0.022	(0.272)	0.019	0.002
245	20.42	0.10	0.022	(0.271)	0.019	0.002
246	20.50	0.10	0.022	(0.269)	0.019	0.002
247	20.58	0.10	0.022	(0.268)	0.019	0.002
248	20.67	0.10	0.022	(0.267)	0.019	0.002
249	20.75	0.10	0.022	(0.266)	0.019	0.002
250	20.83	0.07	0.014	(0.265)	0.013	0.001
251	20.92	0.07	0.014	(0.264)	0.013	0.001
252	21.00	0.07	0.014	(0.263)	0.013	0.001
253	21.08	0.10	0.022	(0.262)	0.019	0.002
254	21.17	0.10	0.022	(0.261)	0.019	0.002
255	21.25	0.10	0.022	(0.260)	0.019	0.002
256	21.33	0.07	0.014	(0.259)	0.013	0.001
257	21.42	0.07	0.014	(0.258)	0.013	0.001
258	21.50	0.07	0.014	(0.257)	0.013	0.001
259	21.58	0.10	0.022	(0.256)	0.019	0.002
260	21.67	0.10	0.022	(0.255)	0.019	0.002
261	21.75	0.10	0.022	(0.254)	0.019	0.002
262	21.83	0.07	0.014	(0.253)	0.013	0.001
263	21.92	0.07	0.014	(0.252)	0.013	0.001
264	22.00	0.07	0.014	(0.251)	0.013	0.001
265	22.08	0.10	0.022	(0.251)	0.019	0.002
266	22.17	0.10	0.022	(0.250)	0.019	0.002

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267  22.25     0.10      0.022       (  0.249)       0.019        0.002
268  22.33     0.07      0.014       (  0.248)       0.013        0.001
269  22.42     0.07      0.014       (  0.247)       0.013        0.001
270  22.50     0.07      0.014       (  0.247)       0.013        0.001
271  22.58     0.07      0.014       (  0.246)       0.013        0.001
272  22.67     0.07      0.014       (  0.245)       0.013        0.001
273  22.75     0.07      0.014       (  0.245)       0.013        0.001
274  22.83     0.07      0.014       (  0.244)       0.013        0.001
275  22.92     0.07      0.014       (  0.243)       0.013        0.001
276  23.00     0.07      0.014       (  0.243)       0.013        0.001
277  23.08     0.07      0.014       (  0.242)       0.013        0.001
278  23.17     0.07      0.014       (  0.242)       0.013        0.001
279  23.25     0.07      0.014       (  0.241)       0.013        0.001
280  23.33     0.07      0.014       (  0.241)       0.013        0.001
281  23.42     0.07      0.014       (  0.240)       0.013        0.001
282  23.50     0.07      0.014       (  0.240)       0.013        0.001
283  23.58     0.07      0.014       (  0.239)       0.013        0.001
284  23.67     0.07      0.014       (  0.239)       0.013        0.001
285  23.75     0.07      0.014       (  0.239)       0.013        0.001
286  23.83     0.07      0.014       (  0.238)       0.013        0.001
287  23.92     0.07      0.014       (  0.238)       0.013        0.001
288  24.00     0.07      0.014       (  0.238)       0.013        0.001
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =     2.2
       Flood volume = Effective rainfall      0.18(In)
        times area      40.6(Ac.)/[(In)/(Ft.)] =       0.6(Ac.Ft)
       Total soil loss =      1.62(In)
       Total soil loss =     5.475(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =       26499.8 Cubic Feet
       Total soil loss =      238498.2 Cubic Feet
       ------------------------------------------------------------------
        Peak flow rate of this hydrograph =      0.989(CFS)
       ------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0000      0.01  Q         |         |         |         |
   0+10       0.0003      0.03  Q         |         |         |         |
   0+15       0.0006      0.04  Q         |         |         |         |
   0+20       0.0009      0.05  Q         |         |         |         |
   0+25       0.0014      0.07  Q         |         |         |         |
   0+30       0.0019      0.08  Q         |         |         |         |
   0+35       0.0025      0.08  Q         |         |         |         |
   0+40       0.0030      0.08  Q         |         |         |         |
   0+45       0.0036      0.08  Q         |         |         |         |
   0+50       0.0042      0.09  Q         |         |         |         |
   0+55       0.0049      0.10  Q         |         |         |         |
   1+ 0       0.0057      0.11  Q         |         |         |         |
   1+ 5       0.0064      0.11  Q         |         |         |         |
   1+10       0.0071      0.10  Q         |         |         |         |
   1+15       0.0078      0.09  Q         |         |         |         |
   1+20       0.0084      0.09  Q         |         |         |         |
   1+25       0.0090      0.09  Q         |         |         |         |
   1+30       0.0096      0.09  Q         |         |         |         |
   1+35       0.0103      0.09  Q         |         |         |         |
   1+40       0.0109      0.09  Q         |         |         |         |
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1+45	0.0115	0.09	Q	|	|	|	|
1+50	0.0121	0.09	Q	|	|	|	|
1+55	0.0128	0.10	Q	|	|	|	|
2+ 0	0.0136	0.11	Q	|	|	|	|
2+ 5	0.0144	0.11	Q	|	|	|	|
2+10	0.0152	0.11	Q	|	|	|	|
2+15	0.0160	0.12	QV	|	|	|	|
2+20	0.0168	0.12	QV	|	|	|	|
2+25	0.0176	0.12	QV	|	|	|	|
2+30	0.0184	0.12	QV	|	|	|	|
2+35	0.0192	0.12	QV	|	|	|	|
2+40	0.0201	0.13	QV	|	|	|	|
2+45	0.0211	0.14	QV	|	|	|	|
2+50	0.0221	0.14	QV	|	|	|	|
2+55	0.0230	0.14	QV	|	|	|	|
3+ 0	0.0240	0.14	QV	|	|	|	|
3+ 5	0.0250	0.15	QV	|	|	|	|
3+10	0.0261	0.15	QV	|	|	|	|
3+15	0.0271	0.15	QV	|	|	|	|
3+20	0.0281	0.15	QV	|	|	|	|
3+25	0.0291	0.15	QV	|	|	|	|
3+30	0.0301	0.15	QV	|	|	|	|
3+35	0.0311	0.15	Q V	|	|	|	|
3+40	0.0321	0.15	Q V	|	|	|	|
3+45	0.0331	0.15	Q V	|	|	|	|
3+50	0.0342	0.15	Q V	|	|	|	|
3+55	0.0353	0.16	Q V	|	|	|	|
4+ 0	0.0365	0.17	Q V	|	|	|	|
4+ 5	0.0376	0.17	Q V	|	|	|	|
4+10	0.0388	0.17	Q V	|	|	|	|
4+15	0.0400	0.17	Q V	|	|	|	|
4+20	0.0413	0.18	Q V	|	|	|	|
4+25	0.0426	0.19	Q V	|	|	|	|
4+30	0.0439	0.20	Q V	|	|	|	|
4+35	0.0453	0.20	Q V	|	|	|	|
4+40	0.0467	0.20	Q V	|	|	|	|
4+45	0.0481	0.20	Q V	|	|	|	|
4+50	0.0496	0.21	Q V	|	|	|	|
4+55	0.0511	0.22	Q V	|	|	|	|
5+ 0	0.0526	0.23	Q V	|	|	|	|
5+ 5	0.0542	0.22	Q V	|	|	|	|
5+10	0.0556	0.20	Q V	|	|	|	|
5+15	0.0569	0.19	Q V	|	|	|	|
5+20	0.0582	0.19	Q V	|	|	|	|
5+25	0.0595	0.20	Q V	|	|	|	|
5+30	0.0609	0.20	Q V	|	|	|	|
5+35	0.0624	0.21	Q V	|	|	|	|
5+40	0.0639	0.22	Q V	|	|	|	|
5+45	0.0654	0.23	Q V	|	|	|	|
5+50	0.0670	0.23	Q V	|	|	|	|
5+55	0.0686	0.23	Q V	|	|	|	|
6+ 0	0.0702	0.23	Q V	|	|	|	|
6+ 5	0.0718	0.24	Q V	|	|	|	|
6+10	0.0736	0.25	Q V	|	|	|	|
6+15	0.0753	0.26	|Q V	|	|	|	|
6+20	0.0771	0.26	|Q V	|	|	|	|
6+25	0.0789	0.26	|Q V	|	|	|	|
6+30	0.0807	0.26	|Q V	|	|	|	|
6+35	0.0826	0.27	|Q V	|	|	|	|
6+40	0.0845	0.28	|Q V	|	|	|	|
6+45	0.0865	0.29	|Q V	|	|	|	|
6+50	0.0885	0.29	|Q V	|	|	|	|
6+55	0.0905	0.29	|Q V	|	|	|	|

7+ 0	0.0925	0.29	Q V				
7+ 5	0.0945	0.29	Q V				
7+10	0.0965	0.29	Q V				
7+15	0.0985	0.29	Q V				
7+20	0.1006	0.30	Q V				
7+25	0.1027	0.31	Q V				
7+30	0.1049	0.32	Q V				
7+35	0.1071	0.32	Q V				
7+40	0.1094	0.34	Q V				
7+45	0.1118	0.34	Q V				
7+50	0.1142	0.35	Q V				
7+55	0.1167	0.36	Q V				
8+ 0	0.1193	0.37	Q V				
8+ 5	0.1219	0.38	Q V				
8+10	0.1247	0.41	Q V				
8+15	0.1276	0.42	Q V				
8+20	0.1306	0.43	Q V				
8+25	0.1336	0.43	Q V				
8+30	0.1366	0.44	Q V				
8+35	0.1396	0.44	Q V				
8+40	0.1428	0.45	Q V				
8+45	0.1460	0.46	Q V				
8+50	0.1492	0.47	Q V				
8+55	0.1525	0.48	Q V				
9+ 0	0.1559	0.49	Q V				
9+ 5	0.1593	0.50	Q V				
9+10	0.1630	0.53	Q V				
9+15	0.1667	0.54	Q V				
9+20	0.1705	0.55	Q V				
9+25	0.1744	0.57	Q V				
9+30	0.1784	0.58	Q V				
9+35	0.1824	0.58	Q V				
9+40	0.1865	0.60	Q V				
9+45	0.1907	0.61	Q V				
9+50	0.1949	0.61	Q V				
9+55	0.1992	0.63	Q V				
10+ 0	0.2036	0.64	Q V				
10+ 5	0.2079	0.62	Q V				
10+10	0.2116	0.54	Q V				
10+15	0.2150	0.49	Q V				
10+20	0.2182	0.47	Q V				
10+25	0.2214	0.46	Q V				
10+30	0.2246	0.46	Q V				
10+35	0.2278	0.47	Q V				
10+40	0.2314	0.52	Q V				
10+45	0.2352	0.56	Q V				
10+50	0.2392	0.57	Q V				
10+55	0.2431	0.57	Q V				
11+ 0	0.2471	0.58	Q V				
11+ 5	0.2511	0.58	Q V				
11+10	0.2550	0.57	Q V				
11+15	0.2589	0.56	Q V				
11+20	0.2627	0.56	Q V				
11+25	0.2666	0.56	Q V				
11+30	0.2705	0.56	Q V				
11+35	0.2743	0.55	Q V				
11+40	0.2779	0.53	Q V				
11+45	0.2815	0.52	Q V				
11+50	0.2850	0.51	Q V				
11+55	0.2886	0.52	Q V				
12+ 0	0.2923	0.53	Q V				
12+ 5	0.2961	0.55	Q V				
12+10	0.3004	0.64	Q V				

12+15	0.3051	0.68	Q	V			
12+20	0.3100	0.70	Q	V			
12+25	0.3150	0.73	Q	V			
12+30	0.3201	0.74	Q	V			
12+35	0.3253	0.76	Q	V			
12+40	0.3307	0.79	Q	V			
12+45	0.3362	0.80	Q	V			
12+50	0.3418	0.81	Q	V			
12+55	0.3476	0.83	Q	V			
13+ 0	0.3534	0.84	Q	V			
13+ 5	0.3593	0.86	Q	V			
13+10	0.3657	0.92	Q	V			
13+15	0.3723	0.96	Q	V			
13+20	0.3790	0.97	Q	V			
13+25	0.3858	0.98	Q	V			
13+30	0.3926	0.99	Q	V			
13+35	0.3992	0.96	Q	V			
13+40	0.4049	0.83	Q	V			
13+45	0.4101	0.76	Q	V			
13+50	0.4151	0.73	Q	V			
13+55	0.4200	0.71	Q	V			
14+ 0	0.4249	0.70	Q	V			
14+ 5	0.4297	0.71	Q	V			
14+10	0.4349	0.75	Q	V			
14+15	0.4402	0.77	Q	V			
14+20	0.4455	0.78	Q	V			
14+25	0.4508	0.77	Q	V			
14+30	0.4561	0.76	Q	V			
14+35	0.4614	0.76	Q	V			
14+40	0.4666	0.76	Q	V			
14+45	0.4719	0.77	Q	V			
14+50	0.4771	0.76	Q	V			
14+55	0.4823	0.75	Q	V			
15+ 0	0.4874	0.74	Q	V			
15+ 5	0.4925	0.74	Q	V			
15+10	0.4975	0.72	Q	V			
15+15	0.5024	0.72	Q	V			
15+20	0.5073	0.71	Q	V			
15+25	0.5121	0.70	Q	V			
15+30	0.5169	0.69	Q	V			
15+35	0.5215	0.67	Q	V			
15+40	0.5258	0.62	Q	V			
15+45	0.5298	0.59	Q	V			
15+50	0.5338	0.58	Q	V			
15+55	0.5378	0.57	Q	V			
16+ 0	0.5417	0.57	Q	V			
16+ 5	0.5453	0.52	Q	V			
16+10	0.5476	0.33	Q	V			
16+15	0.5492	0.23	Q	V			
16+20	0.5505	0.19	Q	V			
16+25	0.5517	0.17	Q	V			
16+30	0.5527	0.15	Q	V			
16+35	0.5537	0.14	Q	V			
16+40	0.5545	0.12	Q	V			
16+45	0.5552	0.11	Q	V			
16+50	0.5559	0.10	Q	V			
16+55	0.5565	0.09	Q	V			
17+ 0	0.5572	0.09	Q	V			
17+ 5	0.5578	0.10	Q	V			
17+10	0.5586	0.12	Q	V			
17+15	0.5596	0.13	Q	V			
17+20	0.5605	0.14	Q	V			
17+25	0.5615	0.14	Q	V			

17+30	0.5625	0.14	Q	|	|	|	V |
17+35	0.5635	0.14	Q	|	|	|	V |
17+40	0.5645	0.15	Q	|	|	|	V |
17+45	0.5655	0.15	Q	|	|	|	V |
17+50	0.5664	0.14	Q	|	|	|	V |
17+55	0.5674	0.13	Q	|	|	|	V |
18+ 0	0.5682	0.13	Q	|	|	|	V |
18+ 5	0.5691	0.12	Q	|	|	|	V |
18+10	0.5699	0.12	Q	|	|	|	V |
18+15	0.5707	0.12	Q	|	|	|	V |
18+20	0.5715	0.12	Q	|	|	|	V |
18+25	0.5724	0.12	Q	|	|	|	V |
18+30	0.5732	0.12	Q	|	|	|	V |
18+35	0.5740	0.11	Q	|	|	|	V |
18+40	0.5747	0.10	Q	|	|	|	V |
18+45	0.5753	0.10	Q	|	|	|	V |
18+50	0.5760	0.09	Q	|	|	|	V |
18+55	0.5765	0.08	Q	|	|	|	V |
19+ 0	0.5770	0.07	Q	|	|	|	V |
19+ 5	0.5774	0.07	Q	|	|	|	V |
19+10	0.5780	0.08	Q	|	|	|	V |
19+15	0.5785	0.08	Q	|	|	|	V |
19+20	0.5792	0.09	Q	|	|	|	V |
19+25	0.5799	0.10	Q	|	|	|	V |
19+30	0.5806	0.11	Q	|	|	|	V |
19+35	0.5813	0.11	Q	|	|	|	V |
19+40	0.5820	0.10	Q	|	|	|	V |
19+45	0.5827	0.09	Q	|	|	|	V |
19+50	0.5833	0.09	Q	|	|	|	V |
19+55	0.5838	0.08	Q	|	|	|	V |
20+ 0	0.5843	0.07	Q	|	|	|	V |
20+ 5	0.5847	0.07	Q	|	|	|	V |
20+10	0.5853	0.08	Q	|	|	|	V |
20+15	0.5858	0.08	Q	|	|	|	V |
20+20	0.5864	0.09	Q	|	|	|	V |
20+25	0.5870	0.09	Q	|	|	|	V |
20+30	0.5876	0.09	Q	|	|	|	V |
20+35	0.5882	0.09	Q	|	|	|	V |
20+40	0.5888	0.09	Q	|	|	|	V |
20+45	0.5894	0.09	Q	|	|	|	V |
20+50	0.5900	0.08	Q	|	|	|	V |
20+55	0.5905	0.07	Q	|	|	|	V |
21+ 0	0.5910	0.07	Q	|	|	|	V |
21+ 5	0.5914	0.07	Q	|	|	|	V |
21+10	0.5920	0.08	Q	|	|	|	V |
21+15	0.5925	0.08	Q	|	|	|	V |
21+20	0.5931	0.08	Q	|	|	|	V |
21+25	0.5936	0.07	Q	|	|	|	V|
21+30	0.5940	0.06	Q	|	|	|	V|
21+35	0.5945	0.07	Q	|	|	|	V|
21+40	0.5950	0.08	Q	|	|	|	V|
21+45	0.5956	0.08	Q	|	|	|	V|
21+50	0.5961	0.08	Q	|	|	|	V|
21+55	0.5966	0.07	Q	|	|	|	V|
22+ 0	0.5971	0.06	Q	|	|	|	V|
22+ 5	0.5975	0.07	Q	|	|	|	V|
22+10	0.5981	0.08	Q	|	|	|	V|
22+15	0.5986	0.08	Q	|	|	|	V|
22+20	0.5992	0.08	Q	|	|	|	V|
22+25	0.5997	0.07	Q	|	|	|	V|
22+30	0.6001	0.06	Q	|	|	|	V|
22+35	0.6006	0.06	Q	|	|	|	V|
22+40	0.6010	0.06	Q	|	|	|	V|

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  22+45       0.6014      0.06  Q         |         |         |         V|
  22+50       0.6018      0.06  Q         |         |         |         V|
  22+55       0.6022      0.06  Q         |         |         |         V|
  23+ 0       0.6026      0.06  Q         |         |         |         V|
  23+ 5       0.6030      0.06  Q         |         |         |         V|
  23+10       0.6034      0.06  Q         |         |         |         V|
  23+15       0.6038      0.06  Q         |         |         |         V|
  23+20       0.6043      0.06  Q         |         |         |         V|
  23+25       0.6047      0.06  Q         |         |         |         V|
  23+30       0.6051      0.06  Q         |         |         |         V|
  23+35       0.6055      0.06  Q         |         |         |         V|
  23+40       0.6059      0.06  Q         |         |         |         V|
  23+45       0.6063      0.06  Q         |         |         |         V|
  23+50       0.6067      0.06  Q         |         |         |         V|
  23+55       0.6071      0.06  Q         |         |         |         V|
  24+ 0       0.6075      0.06  Q         |         |         |         V|
  24+ 5       0.6079      0.05  Q         |         |         |         V|
  24+10       0.6081      0.03  Q         |         |         |         V|
  24+15       0.6082      0.02  Q         |         |         |         V|
  24+20       0.6082      0.01  Q         |         |         |         V|
  24+25       0.6083      0.01  Q         |         |         |         V|
  24+30       0.6083      0.00  Q         |         |         |         V|
  24+35       0.6083      0.00  Q         |         |         |         V|
  24+40       0.6083      0.00  Q         |         |         |         V|
  24+45       0.6083      0.00  Q         |         |         |         V|
  24+50       0.6083      0.00  Q         |         |         |         V|
  24+55       0.6084      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

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Study date 07/10/25 File: xc2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 "TRES CERRITOS" PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
EXISTING AREA "XC" (VERNAL POOL)
10-YEAR
24-HOUR

Drainage Area = 40.56(Ac.) = 0.063 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 40.56(Ac.) = 0.063 Sq. Mi.
Length along longest watercourse = 3189.00(Ft.)
Length along longest watercourse measured to centroid = 1921.00(Ft.)
Length along longest watercourse = 0.604 Mi.
Length along longest watercourse measured to centroid = 0.364 Mi.
Difference in elevation = 419.70(Ft.)
Slope along watercourse = 694.8937 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.117 Hr.
Lag time = 7.01 Min.
25% of lag time = 1.75 Min.
40% of lag time = 2.80 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
40.56	1.80	73.01

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
40.56	4.50	182.52

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
40.560	77.00	0.000

Total Area Entered = 40.56(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	1.000	0.279
					Sum (F) =	0.279

Area averaged mean soil loss (F) (In/Hr) = 0.279
Minimum soil loss rate ((In/Hr)) = 0.140
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	71.371	10.978	4.487
2	0.167	142.743	40.801	16.678
3	0.250	214.114	22.679	9.270
4	0.333	285.485	8.888	3.633
5	0.417	356.856	5.402	2.208
6	0.500	428.228	3.558	1.454
7	0.583	499.599	2.406	0.983
8	0.667	570.970	1.853	0.758
9	0.750	642.341	1.306	0.534
10	0.833	713.713	0.909	0.372
11	0.917	785.084	0.715	0.292
12	1.000	856.455	0.506	0.207
			Sum = 100.000	Sum= 40.877

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.495)		0.021	0.002
2	0.17	0.07	0.023	(0.493)		0.021	0.002
3	0.25	0.07	0.023	(0.491)		0.021	0.002
4	0.33	0.10	0.035	(0.490)		0.031	0.003
5	0.42	0.10	0.035	(0.488)		0.031	0.003
6	0.50	0.10	0.035	(0.486)		0.031	0.003
7	0.58	0.10	0.035	(0.484)		0.031	0.003
8	0.67	0.10	0.035	(0.482)		0.031	0.003
9	0.75	0.10	0.035	(0.480)		0.031	0.003
10	0.83	0.13	0.047	(0.478)		0.042	0.005
11	0.92	0.13	0.047	(0.476)		0.042	0.005
12	1.00	0.13	0.047	(0.474)		0.042	0.005
13	1.08	0.10	0.035	(0.473)		0.031	0.003
14	1.17	0.10	0.035	(0.471)		0.031	0.003

15	1.25	0.10	0.035	(0.469)	0.031	0.003
16	1.33	0.10	0.035	(0.467)	0.031	0.003
17	1.42	0.10	0.035	(0.465)	0.031	0.003
18	1.50	0.10	0.035	(0.463)	0.031	0.003
19	1.58	0.10	0.035	(0.461)	0.031	0.003
20	1.67	0.10	0.035	(0.460)	0.031	0.003
21	1.75	0.10	0.035	(0.458)	0.031	0.003
22	1.83	0.13	0.047	(0.456)	0.042	0.005
23	1.92	0.13	0.047	(0.454)	0.042	0.005
24	2.00	0.13	0.047	(0.452)	0.042	0.005
25	2.08	0.13	0.047	(0.450)	0.042	0.005
26	2.17	0.13	0.047	(0.449)	0.042	0.005
27	2.25	0.13	0.047	(0.447)	0.042	0.005
28	2.33	0.13	0.047	(0.445)	0.042	0.005
29	2.42	0.13	0.047	(0.443)	0.042	0.005
30	2.50	0.13	0.047	(0.441)	0.042	0.005
31	2.58	0.17	0.058	(0.439)	0.052	0.006
32	2.67	0.17	0.058	(0.438)	0.052	0.006
33	2.75	0.17	0.058	(0.436)	0.052	0.006
34	2.83	0.17	0.058	(0.434)	0.052	0.006
35	2.92	0.17	0.058	(0.432)	0.052	0.006
36	3.00	0.17	0.058	(0.430)	0.052	0.006
37	3.08	0.17	0.058	(0.429)	0.052	0.006
38	3.17	0.17	0.058	(0.427)	0.052	0.006
39	3.25	0.17	0.058	(0.425)	0.052	0.006
40	3.33	0.17	0.058	(0.423)	0.052	0.006
41	3.42	0.17	0.058	(0.422)	0.052	0.006
42	3.50	0.17	0.058	(0.420)	0.052	0.006
43	3.58	0.17	0.058	(0.418)	0.052	0.006
44	3.67	0.17	0.058	(0.416)	0.052	0.006
45	3.75	0.17	0.058	(0.415)	0.052	0.006
46	3.83	0.20	0.070	(0.413)	0.063	0.007
47	3.92	0.20	0.070	(0.411)	0.063	0.007
48	4.00	0.20	0.070	(0.409)	0.063	0.007
49	4.08	0.20	0.070	(0.408)	0.063	0.007
50	4.17	0.20	0.070	(0.406)	0.063	0.007
51	4.25	0.20	0.070	(0.404)	0.063	0.007
52	4.33	0.23	0.081	(0.402)	0.073	0.008
53	4.42	0.23	0.081	(0.401)	0.073	0.008
54	4.50	0.23	0.081	(0.399)	0.073	0.008
55	4.58	0.23	0.081	(0.397)	0.073	0.008
56	4.67	0.23	0.081	(0.396)	0.073	0.008
57	4.75	0.23	0.081	(0.394)	0.073	0.008
58	4.83	0.27	0.093	(0.392)	0.084	0.009
59	4.92	0.27	0.093	(0.390)	0.084	0.009
60	5.00	0.27	0.093	(0.389)	0.084	0.009
61	5.08	0.20	0.070	(0.387)	0.063	0.007
62	5.17	0.20	0.070	(0.385)	0.063	0.007
63	5.25	0.20	0.070	(0.384)	0.063	0.007
64	5.33	0.23	0.081	(0.382)	0.073	0.008
65	5.42	0.23	0.081	(0.380)	0.073	0.008
66	5.50	0.23	0.081	(0.379)	0.073	0.008
67	5.58	0.27	0.093	(0.377)	0.084	0.009
68	5.67	0.27	0.093	(0.375)	0.084	0.009
69	5.75	0.27	0.093	(0.374)	0.084	0.009
70	5.83	0.27	0.093	(0.372)	0.084	0.009
71	5.92	0.27	0.093	(0.370)	0.084	0.009
72	6.00	0.27	0.093	(0.369)	0.084	0.009
73	6.08	0.30	0.105	(0.367)	0.094	0.010
74	6.17	0.30	0.105	(0.366)	0.094	0.010
75	6.25	0.30	0.105	(0.364)	0.094	0.010
76	6.33	0.30	0.105	(0.362)	0.094	0.010
77	6.42	0.30	0.105	(0.361)	0.094	0.010

78	6.50	0.30	0.105	(0.359)	0.094	0.010
79	6.58	0.33	0.116	(0.357)	0.105	0.012
80	6.67	0.33	0.116	(0.356)	0.105	0.012
81	6.75	0.33	0.116	(0.354)	0.105	0.012
82	6.83	0.33	0.116	(0.353)	0.105	0.012
83	6.92	0.33	0.116	(0.351)	0.105	0.012
84	7.00	0.33	0.116	(0.349)	0.105	0.012
85	7.08	0.33	0.116	(0.348)	0.105	0.012
86	7.17	0.33	0.116	(0.346)	0.105	0.012
87	7.25	0.33	0.116	(0.345)	0.105	0.012
88	7.33	0.37	0.128	(0.343)	0.115	0.013
89	7.42	0.37	0.128	(0.342)	0.115	0.013
90	7.50	0.37	0.128	(0.340)	0.115	0.013
91	7.58	0.40	0.140	(0.338)	0.126	0.014
92	7.67	0.40	0.140	(0.337)	0.126	0.014
93	7.75	0.40	0.140	(0.335)	0.126	0.014
94	7.83	0.43	0.151	(0.334)	0.136	0.015
95	7.92	0.43	0.151	(0.332)	0.136	0.015
96	8.00	0.43	0.151	(0.331)	0.136	0.015
97	8.08	0.50	0.175	(0.329)	0.157	0.017
98	8.17	0.50	0.175	(0.328)	0.157	0.017
99	8.25	0.50	0.175	(0.326)	0.157	0.017
100	8.33	0.50	0.175	(0.325)	0.157	0.017
101	8.42	0.50	0.175	(0.323)	0.157	0.017
102	8.50	0.50	0.175	(0.322)	0.157	0.017
103	8.58	0.53	0.186	(0.320)	0.168	0.019
104	8.67	0.53	0.186	(0.318)	0.168	0.019
105	8.75	0.53	0.186	(0.317)	0.168	0.019
106	8.83	0.57	0.198	(0.316)	0.178	0.020
107	8.92	0.57	0.198	(0.314)	0.178	0.020
108	9.00	0.57	0.198	(0.313)	0.178	0.020
109	9.08	0.63	0.221	(0.311)	0.199	0.022
110	9.17	0.63	0.221	(0.310)	0.199	0.022
111	9.25	0.63	0.221	(0.308)	0.199	0.022
112	9.33	0.67	0.233	(0.307)	0.210	0.023
113	9.42	0.67	0.233	(0.305)	0.210	0.023
114	9.50	0.67	0.233	(0.304)	0.210	0.023
115	9.58	0.70	0.244	(0.302)	0.220	0.024
116	9.67	0.70	0.244	(0.301)	0.220	0.024
117	9.75	0.70	0.244	(0.299)	0.220	0.024
118	9.83	0.73	0.256	(0.298)	0.231	0.026
119	9.92	0.73	0.256	(0.296)	0.231	0.026
120	10.00	0.73	0.256	(0.295)	0.231	0.026
121	10.08	0.50	0.175	(0.294)	0.157	0.017
122	10.17	0.50	0.175	(0.292)	0.157	0.017
123	10.25	0.50	0.175	(0.291)	0.157	0.017
124	10.33	0.50	0.175	(0.289)	0.157	0.017
125	10.42	0.50	0.175	(0.288)	0.157	0.017
126	10.50	0.50	0.175	(0.287)	0.157	0.017
127	10.58	0.67	0.233	(0.285)	0.210	0.023
128	10.67	0.67	0.233	(0.284)	0.210	0.023
129	10.75	0.67	0.233	(0.282)	0.210	0.023
130	10.83	0.67	0.233	(0.281)	0.210	0.023
131	10.92	0.67	0.233	(0.280)	0.210	0.023
132	11.00	0.67	0.233	(0.278)	0.210	0.023
133	11.08	0.63	0.221	(0.277)	0.199	0.022
134	11.17	0.63	0.221	(0.276)	0.199	0.022
135	11.25	0.63	0.221	(0.274)	0.199	0.022
136	11.33	0.63	0.221	(0.273)	0.199	0.022
137	11.42	0.63	0.221	(0.271)	0.199	0.022
138	11.50	0.63	0.221	(0.270)	0.199	0.022
139	11.58	0.57	0.198	(0.269)	0.178	0.020
140	11.67	0.57	0.198	(0.267)	0.178	0.020

141	11.75	0.57	0.198	(	0.266)	0.178	0.020
142	11.83	0.60	0.210	(	0.265)	0.189	0.021
143	11.92	0.60	0.210	(	0.263)	0.189	0.021
144	12.00	0.60	0.210	(	0.262)	0.189	0.021
145	12.08	0.83	0.291		0.261	(0.262)	0.030
146	12.17	0.83	0.291		0.260	(0.262)	0.032
147	12.25	0.83	0.291		0.258	(0.262)	0.033
148	12.33	0.87	0.303		0.257	(0.272)	0.046
149	12.42	0.87	0.303		0.256	(0.272)	0.047
150	12.50	0.87	0.303		0.254	(0.272)	0.048
151	12.58	0.93	0.326		0.253	(0.293)	0.073
152	12.67	0.93	0.326		0.252	(0.293)	0.074
153	12.75	0.93	0.326		0.251	(0.293)	0.075
154	12.83	0.97	0.338		0.249	(0.304)	0.088
155	12.92	0.97	0.338		0.248	(0.304)	0.090
156	13.00	0.97	0.338		0.247	(0.304)	0.091
157	13.08	1.13	0.396		0.245	(0.356)	0.150
158	13.17	1.13	0.396		0.244	(0.356)	0.152
159	13.25	1.13	0.396		0.243	(0.356)	0.153
160	13.33	1.13	0.396		0.242	(0.356)	0.154
161	13.42	1.13	0.396		0.241	(0.356)	0.155
162	13.50	1.13	0.396		0.239	(0.356)	0.157
163	13.58	0.77	0.268		0.238	(0.241)	0.030
164	13.67	0.77	0.268		0.237	(0.241)	0.031
165	13.75	0.77	0.268		0.236	(0.241)	0.032
166	13.83	0.77	0.268		0.234	(0.241)	0.033
167	13.92	0.77	0.268		0.233	(0.241)	0.034
168	14.00	0.77	0.268		0.232	(0.241)	0.036
169	14.08	0.90	0.314		0.231	(0.283)	0.083
170	14.17	0.90	0.314		0.230	(0.283)	0.085
171	14.25	0.90	0.314		0.229	(0.283)	0.086
172	14.33	0.87	0.303		0.227	(0.272)	0.075
173	14.42	0.87	0.303		0.226	(0.272)	0.076
174	14.50	0.87	0.303		0.225	(0.272)	0.078
175	14.58	0.87	0.303		0.224	(0.272)	0.079
176	14.67	0.87	0.303		0.223	(0.272)	0.080
177	14.75	0.87	0.303		0.222	(0.272)	0.081
178	14.83	0.83	0.291		0.220	(0.262)	0.071
179	14.92	0.83	0.291		0.219	(0.262)	0.072
180	15.00	0.83	0.291		0.218	(0.262)	0.073
181	15.08	0.80	0.279		0.217	(0.251)	0.062
182	15.17	0.80	0.279		0.216	(0.251)	0.063
183	15.25	0.80	0.279		0.215	(0.251)	0.065
184	15.33	0.77	0.268		0.214	(0.241)	0.054
185	15.42	0.77	0.268		0.213	(0.241)	0.055
186	15.50	0.77	0.268		0.212	(0.241)	0.056
187	15.58	0.63	0.221	(	0.211)	0.199	0.022
188	15.67	0.63	0.221	(	0.209)	0.199	0.022
189	15.75	0.63	0.221	(	0.208)	0.199	0.022
190	15.83	0.63	0.221	(	0.207)	0.199	0.022
191	15.92	0.63	0.221	(	0.206)	0.199	0.022
192	16.00	0.63	0.221	(	0.205)	0.199	0.022
193	16.08	0.13	0.047	(	0.204)	0.042	0.005
194	16.17	0.13	0.047	(	0.203)	0.042	0.005
195	16.25	0.13	0.047	(	0.202)	0.042	0.005
196	16.33	0.13	0.047	(	0.201)	0.042	0.005
197	16.42	0.13	0.047	(	0.200)	0.042	0.005
198	16.50	0.13	0.047	(	0.199)	0.042	0.005
199	16.58	0.10	0.035	(	0.198)	0.031	0.003
200	16.67	0.10	0.035	(	0.197)	0.031	0.003
201	16.75	0.10	0.035	(	0.196)	0.031	0.003
202	16.83	0.10	0.035	(	0.195)	0.031	0.003
203	16.92	0.10	0.035	(	0.194)	0.031	0.003

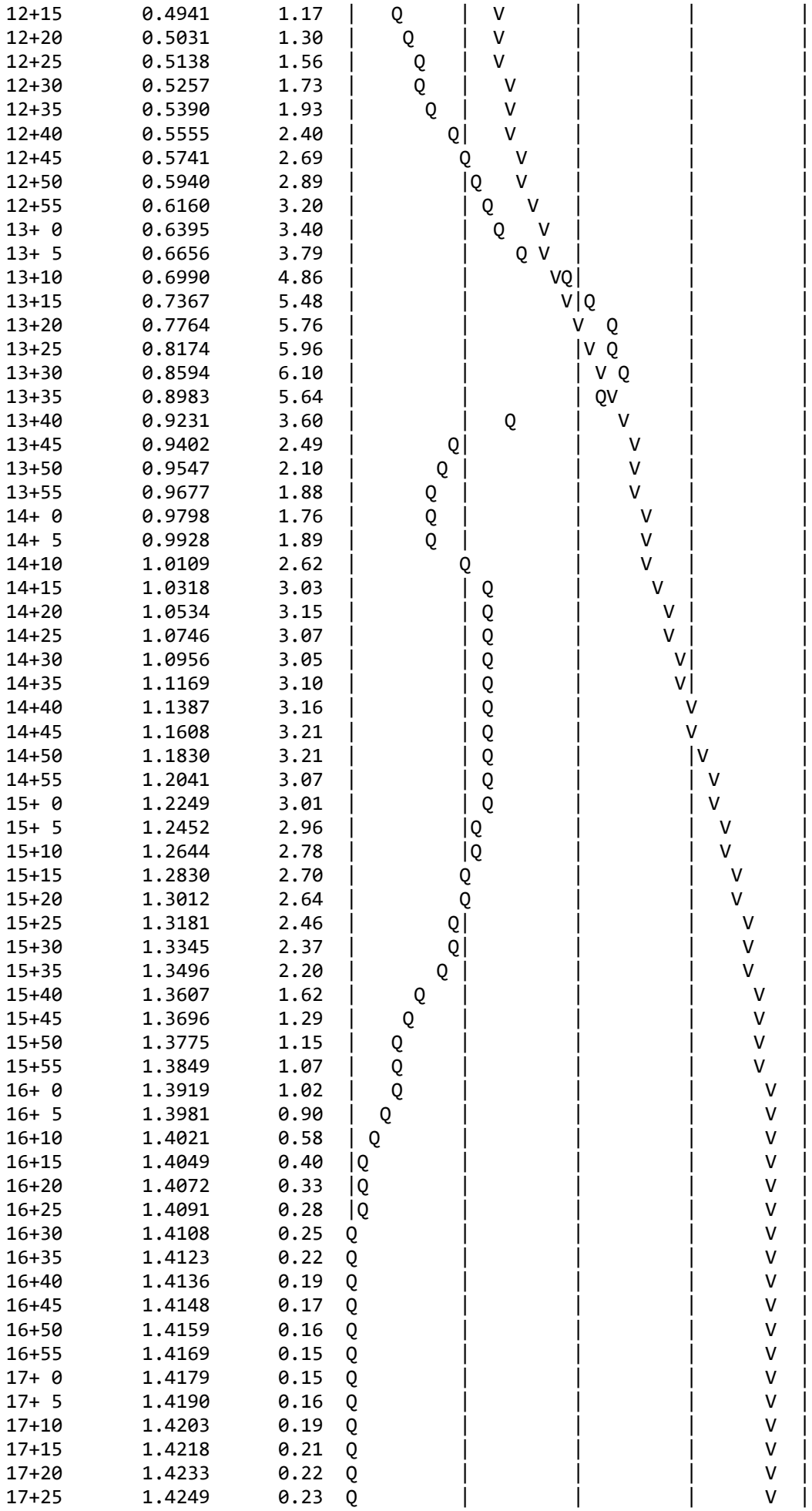
204	17.00	0.10	0.035	(0.193)	0.031	0.003
205	17.08	0.17	0.058	(0.192)	0.052	0.006
206	17.17	0.17	0.058	(0.191)	0.052	0.006
207	17.25	0.17	0.058	(0.190)	0.052	0.006
208	17.33	0.17	0.058	(0.189)	0.052	0.006
209	17.42	0.17	0.058	(0.188)	0.052	0.006
210	17.50	0.17	0.058	(0.187)	0.052	0.006
211	17.58	0.17	0.058	(0.186)	0.052	0.006
212	17.67	0.17	0.058	(0.185)	0.052	0.006
213	17.75	0.17	0.058	(0.184)	0.052	0.006
214	17.83	0.13	0.047	(0.184)	0.042	0.005
215	17.92	0.13	0.047	(0.183)	0.042	0.005
216	18.00	0.13	0.047	(0.182)	0.042	0.005
217	18.08	0.13	0.047	(0.181)	0.042	0.005
218	18.17	0.13	0.047	(0.180)	0.042	0.005
219	18.25	0.13	0.047	(0.179)	0.042	0.005
220	18.33	0.13	0.047	(0.178)	0.042	0.005
221	18.42	0.13	0.047	(0.177)	0.042	0.005
222	18.50	0.13	0.047	(0.176)	0.042	0.005
223	18.58	0.10	0.035	(0.176)	0.031	0.003
224	18.67	0.10	0.035	(0.175)	0.031	0.003
225	18.75	0.10	0.035	(0.174)	0.031	0.003
226	18.83	0.07	0.023	(0.173)	0.021	0.002
227	18.92	0.07	0.023	(0.172)	0.021	0.002
228	19.00	0.07	0.023	(0.171)	0.021	0.002
229	19.08	0.10	0.035	(0.171)	0.031	0.003
230	19.17	0.10	0.035	(0.170)	0.031	0.003
231	19.25	0.10	0.035	(0.169)	0.031	0.003
232	19.33	0.13	0.047	(0.168)	0.042	0.005
233	19.42	0.13	0.047	(0.167)	0.042	0.005
234	19.50	0.13	0.047	(0.167)	0.042	0.005
235	19.58	0.10	0.035	(0.166)	0.031	0.003
236	19.67	0.10	0.035	(0.165)	0.031	0.003
237	19.75	0.10	0.035	(0.164)	0.031	0.003
238	19.83	0.07	0.023	(0.164)	0.021	0.002
239	19.92	0.07	0.023	(0.163)	0.021	0.002
240	20.00	0.07	0.023	(0.162)	0.021	0.002
241	20.08	0.10	0.035	(0.162)	0.031	0.003
242	20.17	0.10	0.035	(0.161)	0.031	0.003
243	20.25	0.10	0.035	(0.160)	0.031	0.003
244	20.33	0.10	0.035	(0.159)	0.031	0.003
245	20.42	0.10	0.035	(0.159)	0.031	0.003
246	20.50	0.10	0.035	(0.158)	0.031	0.003
247	20.58	0.10	0.035	(0.157)	0.031	0.003
248	20.67	0.10	0.035	(0.157)	0.031	0.003
249	20.75	0.10	0.035	(0.156)	0.031	0.003
250	20.83	0.07	0.023	(0.155)	0.021	0.002
251	20.92	0.07	0.023	(0.155)	0.021	0.002
252	21.00	0.07	0.023	(0.154)	0.021	0.002
253	21.08	0.10	0.035	(0.154)	0.031	0.003
254	21.17	0.10	0.035	(0.153)	0.031	0.003
255	21.25	0.10	0.035	(0.152)	0.031	0.003
256	21.33	0.07	0.023	(0.152)	0.021	0.002
257	21.42	0.07	0.023	(0.151)	0.021	0.002
258	21.50	0.07	0.023	(0.151)	0.021	0.002
259	21.58	0.10	0.035	(0.150)	0.031	0.003
260	21.67	0.10	0.035	(0.150)	0.031	0.003
261	21.75	0.10	0.035	(0.149)	0.031	0.003
262	21.83	0.07	0.023	(0.149)	0.021	0.002
263	21.92	0.07	0.023	(0.148)	0.021	0.002
264	22.00	0.07	0.023	(0.148)	0.021	0.002
265	22.08	0.10	0.035	(0.147)	0.031	0.003
266	22.17	0.10	0.035	(0.147)	0.031	0.003

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267  22.25     0.10      0.035       (  0.146)       0.031        0.003
268  22.33     0.07      0.023       (  0.146)       0.021        0.002
269  22.42     0.07      0.023       (  0.145)       0.021        0.002
270  22.50     0.07      0.023       (  0.145)       0.021        0.002
271  22.58     0.07      0.023       (  0.144)       0.021        0.002
272  22.67     0.07      0.023       (  0.144)       0.021        0.002
273  22.75     0.07      0.023       (  0.144)       0.021        0.002
274  22.83     0.07      0.023       (  0.143)       0.021        0.002
275  22.92     0.07      0.023       (  0.143)       0.021        0.002
276  23.00     0.07      0.023       (  0.142)       0.021        0.002
277  23.08     0.07      0.023       (  0.142)       0.021        0.002
278  23.17     0.07      0.023       (  0.142)       0.021        0.002
279  23.25     0.07      0.023       (  0.142)       0.021        0.002
280  23.33     0.07      0.023       (  0.141)       0.021        0.002
281  23.42     0.07      0.023       (  0.141)       0.021        0.002
282  23.50     0.07      0.023       (  0.141)       0.021        0.002
283  23.58     0.07      0.023       (  0.140)       0.021        0.002
284  23.67     0.07      0.023       (  0.140)       0.021        0.002
285  23.75     0.07      0.023       (  0.140)       0.021        0.002
286  23.83     0.07      0.023       (  0.140)       0.021        0.002
287  23.92     0.07      0.023       (  0.140)       0.021        0.002
288  24.00     0.07      0.023       (  0.140)       0.021        0.002
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     5.3
       Flood volume = Effective rainfall      0.44(In)
        times area      40.6(Ac.)/[(In)/(Ft.)] =       1.5(Ac.Ft)
       Total soil loss =      2.47(In)
       Total soil loss =     8.337(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =       65371.1 Cubic Feet
       Total soil loss =      363160.5 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      6.102(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0001      0.01  Q         |         |         |         |
   0+10       0.0004      0.05  Q         |         |         |         |
   0+15       0.0009      0.07  Q         |         |         |         |
   0+20       0.0015      0.08  Q         |         |         |         |
   0+25       0.0022      0.11  Q         |         |         |         |
   0+30       0.0031      0.12  Q         |         |         |         |
   0+35       0.0040      0.13  Q         |         |         |         |
   0+40       0.0049      0.13  Q         |         |         |         |
   0+45       0.0058      0.14  Q         |         |         |         |
   0+50       0.0068      0.14  Q         |         |         |         |
   0+55       0.0080      0.17  Q         |         |         |         |
   1+ 0       0.0092      0.18  Q         |         |         |         |
   1+ 5       0.0104      0.18  Q         |         |         |         |
   1+10       0.0115      0.16  Q         |         |         |         |
   1+15       0.0126      0.15  Q         |         |         |         |
   1+20       0.0136      0.15  Q         |         |         |         |
   1+25       0.0146      0.15  Q         |         |         |         |
   1+30       0.0156      0.15  Q         |         |         |         |
   1+35       0.0166      0.14  Q         |         |         |         |
   1+40       0.0176      0.14  Q         |         |         |         |
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1+45	0.0186	0.14	Q	|	|	|	|
1+50	0.0196	0.15	Q	|	|	|	|
1+55	0.0208	0.17	Q	|	|	|	|
2+ 0	0.0220	0.18	Q	|	|	|	|
2+ 5	0.0232	0.18	Q	|	|	|	|
2+10	0.0245	0.19	Q	|	|	|	|
2+15	0.0258	0.19	Q	|	|	|	|
2+20	0.0271	0.19	Q	|	|	|	|
2+25	0.0284	0.19	Q	|	|	|	|
2+30	0.0297	0.19	Q	|	|	|	|
2+35	0.0310	0.20	Q	|	|	|	|
2+40	0.0325	0.21	Q	|	|	|	|
2+45	0.0341	0.23	Q	|	|	|	|
2+50	0.0357	0.23	Q	|	|	|	|
2+55	0.0373	0.23	Q	|	|	|	|
3+ 0	0.0389	0.23	QV	|	|	|	|
3+ 5	0.0405	0.24	QV	|	|	|	|
3+10	0.0421	0.24	QV	|	|	|	|
3+15	0.0438	0.24	QV	|	|	|	|
3+20	0.0454	0.24	QV	|	|	|	|
3+25	0.0470	0.24	QV	|	|	|	|
3+30	0.0487	0.24	QV	|	|	|	|
3+35	0.0503	0.24	QV	|	|	|	|
3+40	0.0520	0.24	QV	|	|	|	|
3+45	0.0536	0.24	QV	|	|	|	|
3+50	0.0553	0.24	QV	|	|	|	|
3+55	0.0571	0.26	|Q	|	|	|	|
4+ 0	0.0590	0.27	|Q	|	|	|	|
4+ 5	0.0609	0.28	|Q	|	|	|	|
4+10	0.0628	0.28	|Q	|	|	|	|
4+15	0.0648	0.28	|Q	|	|	|	|
4+20	0.0667	0.29	|Q	|	|	|	|
4+25	0.0689	0.31	|Q	|	|	|	|
4+30	0.0711	0.32	|Q	|	|	|	|
4+35	0.0733	0.32	|Q	|	|	|	|
4+40	0.0756	0.33	|QV	|	|	|	|
4+45	0.0778	0.33	|QV	|	|	|	|
4+50	0.0801	0.34	|QV	|	|	|	|
4+55	0.0826	0.36	|QV	|	|	|	|
5+ 0	0.0851	0.37	|QV	|	|	|	|
5+ 5	0.0876	0.36	|QV	|	|	|	|
5+10	0.0899	0.33	|QV	|	|	|	|
5+15	0.0920	0.31	|QV	|	|	|	|
5+20	0.0941	0.30	|QV	|	|	|	|
5+25	0.0963	0.32	|QV	|	|	|	|
5+30	0.0985	0.33	|QV	|	|	|	|
5+35	0.1008	0.34	|QV	|	|	|	|
5+40	0.1033	0.36	|QV	|	|	|	|
5+45	0.1058	0.37	|QV	|	|	|	|
5+50	0.1084	0.37	|QV	|	|	|	|
5+55	0.1110	0.37	|QV	|	|	|	|
6+ 0	0.1135	0.38	|Q V	|	|	|	|
6+ 5	0.1162	0.38	|Q V	|	|	|	|
6+10	0.1190	0.40	|Q V	|	|	|	|
6+15	0.1218	0.42	|Q V	|	|	|	|
6+20	0.1247	0.42	|Q V	|	|	|	|
6+25	0.1276	0.42	|Q V	|	|	|	|
6+30	0.1306	0.42	|Q V	|	|	|	|
6+35	0.1335	0.43	|Q V	|	|	|	|
6+40	0.1366	0.45	|Q V	|	|	|	|
6+45	0.1398	0.46	|Q V	|	|	|	|
6+50	0.1430	0.47	|Q V	|	|	|	|
6+55	0.1463	0.47	|Q V	|	|	|	|

```
 7+ 0       0.1495      0.47  |Q V      |          |          |          |
 7+ 5       0.1528      0.47  |Q  V     |          |          |          |
 7+10       0.1561      0.47  |Q  V     |          |          |          |
 7+15       0.1593      0.48  |Q  V     |          |          |          |
 7+20       0.1627      0.48  |Q  V     |          |          |          |
 7+25       0.1661      0.50  | Q V     |          |          |          |
 7+30       0.1696      0.51  | Q V     |          |          |          |
 7+35       0.1732      0.52  | Q V     |          |          |          |
 7+40       0.1770      0.54  | Q V     |          |          |          |
 7+45       0.1808      0.56  | Q V     |          |          |          |
 7+50       0.1847      0.57  | Q V     |          |          |          |
 7+55       0.1887      0.59  | Q  V    |          |          |          |
 8+ 0       0.1929      0.60  | Q  V    |          |          |          |
 8+ 5       0.1971      0.62  | Q  V    |          |          |          |
 8+10       0.2017      0.66  | Q  V    |          |          |          |
 8+15       0.2064      0.69  | Q  V    |          |          |          |
 8+20       0.2112      0.70  | Q  V    |          |          |          |
 8+25       0.2160      0.70  | Q  V    |          |          |          |
 8+30       0.2209      0.71  | Q  V    |          |          |          |
 8+35       0.2258      0.71  | Q   V   |          |          |          |
 8+40       0.2309      0.74  | Q   V   |          |          |          |
 8+45       0.2360      0.75  | Q   V   |          |          |          |
 8+50       0.2412      0.76  |  Q  V   |          |          |          |
 8+55       0.2466      0.78  |  Q  V   |          |          |          |
 9+ 0       0.2521      0.79  |  Q  V   |          |          |          |
 9+ 5       0.2577      0.81  |  Q  V   |          |          |          |
 9+10       0.2635      0.85  |  Q   V  |          |          |          |
 9+15       0.2696      0.88  |  Q   V  |          |          |          |
 9+20       0.2757      0.89  |  Q   V  |          |          |          |
 9+25       0.2820      0.92  |  Q   V  |          |          |          |
 9+30       0.2884      0.93  |  Q   V  |          |          |          |
 9+35       0.2949      0.94  |  Q   V  |          |          |          |
 9+40       0.3016      0.97  |  Q    V |          |          |          |
 9+45       0.3084      0.98  |  Q    V |          |          |          |
 9+50       0.3152      0.99  |  Q    V |          |          |          |
 9+55       0.3222      1.02  |   Q   V |          |          |          |
10+ 0       0.3293      1.03  |   Q   V |          |          |          |
10+ 5       0.3362      1.00  |  Q    V |          |          |          |
10+10       0.3422      0.87  |  Q     V|          |          |          |
10+15       0.3476      0.79  |  Q     V|          |          |          |
10+20       0.3529      0.77  |  Q     V|          |          |          |
10+25       0.3581      0.75  | Q      V|          |          |          |
10+30       0.3632      0.74  | Q      V|          |          |          |
10+35       0.3684      0.76  |  Q     V|          |          |          |
10+40       0.3742      0.85  |  Q     V|          |          |          |
10+45       0.3804      0.90  |  Q      V          |          |          |
10+50       0.3867      0.92  |  Q      V          |          |          |
10+55       0.3931      0.93  |  Q      V          |          |          |
11+ 0       0.3996      0.93  |  Q      V          |          |          |
11+ 5       0.4060      0.93  |  Q      V          |          |          |
11+10       0.4123      0.92  |  Q      V          |          |          |
11+15       0.4186      0.91  |  Q      |V         |          |          |
11+20       0.4249      0.91  |  Q      |V         |          |          |
11+25       0.4311      0.91  |  Q      |V         |          |          |
11+30       0.4374      0.91  |  Q      |V         |          |          |
11+35       0.4436      0.90  |  Q      |V         |          |          |
11+40       0.4495      0.86  |  Q      |V         |          |          |
11+45       0.4552      0.83  |  Q      | V        |          |          |
11+50       0.4609      0.83  |  Q      | V        |          |          |
11+55       0.4668      0.85  |  Q      | V        |          |          |
12+ 0       0.4726      0.85  |  Q      | V        |          |          |
12+ 5       0.4788      0.90  |  Q      | V        |          |          |
12+10       0.4861      1.06  |   Q     | V        |          |          |
```



12+15	0.4941	1.17	Q	V			
12+20	0.5031	1.30	Q	V			
12+25	0.5138	1.56	Q	V			
12+30	0.5257	1.73	Q	V			
12+35	0.5390	1.93	Q	V			
12+40	0.5555	2.40	Q	V			
12+45	0.5741	2.69	Q	V			
12+50	0.5940	2.89	Q	V			
12+55	0.6160	3.20	Q	V			
13+ 0	0.6395	3.40	Q	V			
13+ 5	0.6656	3.79	Q V				
13+10	0.6990	4.86	VQ				
13+15	0.7367	5.48	V	Q			
13+20	0.7764	5.76	V	Q			
13+25	0.8174	5.96	V	Q			
13+30	0.8594	6.10	V	Q			
13+35	0.8983	5.64	QV				
13+40	0.9231	3.60	Q	V			
13+45	0.9402	2.49	Q	V			
13+50	0.9547	2.10	Q	V			
13+55	0.9677	1.88	Q	V			
14+ 0	0.9798	1.76	Q	V			
14+ 5	0.9928	1.89	Q	V			
14+10	1.0109	2.62	Q	V			
14+15	1.0318	3.03	Q	V			
14+20	1.0534	3.15	Q	V			
14+25	1.0746	3.07	Q	V			
14+30	1.0956	3.05	Q	V			
14+35	1.1169	3.10	Q	V			
14+40	1.1387	3.16	Q	V			
14+45	1.1608	3.21	Q	V			
14+50	1.1830	3.21	Q	V			
14+55	1.2041	3.07	Q	V			
15+ 0	1.2249	3.01	Q	V			
15+ 5	1.2452	2.96	Q	V			
15+10	1.2644	2.78	Q	V			
15+15	1.2830	2.70	Q	V			
15+20	1.3012	2.64	Q	V			
15+25	1.3181	2.46	Q	V			
15+30	1.3345	2.37	Q	V			
15+35	1.3496	2.20	Q	V			
15+40	1.3607	1.62	Q	V			
15+45	1.3696	1.29	Q	V			
15+50	1.3775	1.15	Q	V			
15+55	1.3849	1.07	Q	V			
16+ 0	1.3919	1.02	Q	V			
16+ 5	1.3981	0.90	Q	V			
16+10	1.4021	0.58	Q	V			
16+15	1.4049	0.40	Q	V			
16+20	1.4072	0.33	Q	V			
16+25	1.4091	0.28	Q	V			
16+30	1.4108	0.25	Q	V			
16+35	1.4123	0.22	Q	V			
16+40	1.4136	0.19	Q	V			
16+45	1.4148	0.17	Q	V			
16+50	1.4159	0.16	Q	V			
16+55	1.4169	0.15	Q	V			
17+ 0	1.4179	0.15	Q	V			
17+ 5	1.4190	0.16	Q	V			
17+10	1.4203	0.19	Q	V			
17+15	1.4218	0.21	Q	V			
17+20	1.4233	0.22	Q	V			
17+25	1.4249	0.23	Q	V			

17+30	1.4265	0.23	Q	|	|	|	V |
17+35	1.4281	0.23	Q	|	|	|	V |
17+40	1.4297	0.23	Q	|	|	|	V |
17+45	1.4314	0.24	Q	|	|	|	V |
17+50	1.4329	0.23	Q	|	|	|	V |
17+55	1.4344	0.21	Q	|	|	|	V |
18+ 0	1.4358	0.20	Q	|	|	|	V |
18+ 5	1.4372	0.20	Q	|	|	|	V |
18+10	1.4385	0.20	Q	|	|	|	V |
18+15	1.4399	0.19	Q	|	|	|	V |
18+20	1.4412	0.19	Q	|	|	|	V |
18+25	1.4425	0.19	Q	|	|	|	V |
18+30	1.4438	0.19	Q	|	|	|	V |
18+35	1.4451	0.19	Q	|	|	|	V |
18+40	1.4463	0.17	Q	|	|	|	V |
18+45	1.4473	0.16	Q	|	|	|	V |
18+50	1.4483	0.15	Q	|	|	|	V |
18+55	1.4492	0.12	Q	|	|	|	V |
19+ 0	1.4499	0.11	Q	|	|	|	V |
19+ 5	1.4507	0.11	Q	|	|	|	V |
19+10	1.4516	0.13	Q	|	|	|	V |
19+15	1.4525	0.14	Q	|	|	|	V |
19+20	1.4535	0.14	Q	|	|	|	V |
19+25	1.4546	0.16	Q	|	|	|	V |
19+30	1.4558	0.18	Q	|	|	|	V |
19+35	1.4570	0.18	Q	|	|	|	V |
19+40	1.4581	0.16	Q	|	|	|	V |
19+45	1.4592	0.15	Q	|	|	|	V |
19+50	1.4602	0.14	Q	|	|	|	V |
19+55	1.4610	0.12	Q	|	|	|	V |
20+ 0	1.4618	0.11	Q	|	|	|	V |
20+ 5	1.4625	0.11	Q	|	|	|	V |
20+10	1.4634	0.13	Q	|	|	|	V|
20+15	1.4643	0.14	Q	|	|	|	V|
20+20	1.4653	0.14	Q	|	|	|	V|
20+25	1.4662	0.14	Q	|	|	|	V|
20+30	1.4672	0.14	Q	|	|	|	V|
20+35	1.4682	0.14	Q	|	|	|	V|
20+40	1.4691	0.14	Q	|	|	|	V|
20+45	1.4701	0.14	Q	|	|	|	V|
20+50	1.4711	0.14	Q	|	|	|	V|
20+55	1.4719	0.12	Q	|	|	|	V|
21+ 0	1.4726	0.11	Q	|	|	|	V|
21+ 5	1.4734	0.11	Q	|	|	|	V|
21+10	1.4742	0.13	Q	|	|	|	V|
21+15	1.4751	0.13	Q	|	|	|	V|
21+20	1.4761	0.13	Q	|	|	|	V|
21+25	1.4768	0.11	Q	|	|	|	V|
21+30	1.4776	0.10	Q	|	|	|	V|
21+35	1.4783	0.11	Q	|	|	|	V|
21+40	1.4792	0.12	Q	|	|	|	V|
21+45	1.4801	0.13	Q	|	|	|	V|
21+50	1.4810	0.13	Q	|	|	|	V|
21+55	1.4818	0.11	Q	|	|	|	V|
22+ 0	1.4825	0.10	Q	|	|	|	V|
22+ 5	1.4832	0.11	Q	|	|	|	V|
22+10	1.4841	0.12	Q	|	|	|	V|
22+15	1.4850	0.13	Q	|	|	|	V|
22+20	1.4859	0.13	Q	|	|	|	V|
22+25	1.4867	0.11	Q	|	|	|	V|
22+30	1.4874	0.10	Q	|	|	|	V|
22+35	1.4881	0.10	Q	|	|	|	V|
22+40	1.4888	0.10	Q	|	|	|	V|

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  22+45       1.4895      0.10  Q         |         |         |        V|
  22+50       1.4901      0.10  Q         |         |         |        V|
  22+55       1.4908      0.10  Q         |         |         |        V|
  23+ 0       1.4915      0.10  Q         |         |         |        V|
  23+ 5       1.4921      0.10  Q         |         |         |        V|
  23+10       1.4928      0.10  Q         |         |         |        V|
  23+15       1.4934      0.10  Q         |         |         |        V|
  23+20       1.4941      0.10  Q         |         |         |        V|
  23+25       1.4947      0.10  Q         |         |         |        V|
  23+30       1.4954      0.10  Q         |         |         |        V|
  23+35       1.4961      0.10  Q         |         |         |        V|
  23+40       1.4967      0.10  Q         |         |         |        V|
  23+45       1.4974      0.10  Q         |         |         |        V|
  23+50       1.4980      0.10  Q         |         |         |        V|
  23+55       1.4987      0.10  Q         |         |         |        V|
  24+ 0       1.4993      0.10  Q         |         |         |        V|
  24+ 5       1.4999      0.08  Q         |         |         |        V|
  24+10       1.5002      0.05  Q         |         |         |        V|
  24+15       1.5004      0.02  Q         |         |         |        V|
  24+20       1.5005      0.02  Q         |         |         |        V|
  24+25       1.5006      0.01  Q         |         |         |        V|
  24+30       1.5006      0.01  Q         |         |         |        V|
  24+35       1.5007      0.01  Q         |         |         |        V|
  24+40       1.5007      0.00  Q         |         |         |        V|
  24+45       1.5007      0.00  Q         |         |         |        V|
  24+50       1.5007      0.00  Q         |         |         |        V|
  24+55       1.5007      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
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C.4 - Area "A"

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

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Study date 07/09/25 File: tcpa242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
BASIN A TRIBUTARY PROPOSED CONDITION
2-YEAR
24-HOUR

Drainage Area = 39.37(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.37(Ac.) = 0.062 Sq. Mi.
Length along longest watercourse = 3259.00(Ft.)
Length along longest watercourse measured to centroid = 352.00(Ft.)
Length along longest watercourse = 0.617 Mi.
Length along longest watercourse measured to centroid = 0.067 Mi.
Difference in elevation = 162.50(Ft.)
Slope along watercourse = 263.2709 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.037 Hr.
Lag time = 2.23 Min.
25% of lag time = 0.56 Min.
40% of lag time = 0.89 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.37	1.80	70.87

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.37	4.50	177.16

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
39.370	41.00	0.586

Total Area Entered = 39.37(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
41.0	22.8	0.818	0.586	0.386	1.000	0.386
					Sum (F) =	0.386

Area averaged mean soil loss (F) (In/Hr) = 0.386
Minimum soil loss rate ((In/Hr)) = 0.193
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.431

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	224.355	47.316	18.774
2	0.167	448.711	41.703	16.547
3	0.250	673.066	7.886	3.129
4	0.333	897.421	3.095	1.228
			Sum = 100.000	Sum= 39.678

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.685)	0.006	0.008
2	0.17	0.07	0.014	(0.682)	0.006	0.008
3	0.25	0.07	0.014	(0.680)	0.006	0.008
4	0.33	0.10	0.022	(0.677)	0.009	0.012
5	0.42	0.10	0.022	(0.674)	0.009	0.012
6	0.50	0.10	0.022	(0.672)	0.009	0.012
7	0.58	0.10	0.022	(0.669)	0.009	0.012
8	0.67	0.10	0.022	(0.667)	0.009	0.012
9	0.75	0.10	0.022	(0.664)	0.009	0.012
10	0.83	0.13	0.029	(0.661)	0.012	0.016
11	0.92	0.13	0.029	(0.659)	0.012	0.016
12	1.00	0.13	0.029	(0.656)	0.012	0.016
13	1.08	0.10	0.022	(0.654)	0.009	0.012
14	1.17	0.10	0.022	(0.651)	0.009	0.012
15	1.25	0.10	0.022	(0.648)	0.009	0.012
16	1.33	0.10	0.022	(0.646)	0.009	0.012
17	1.42	0.10	0.022	(0.643)	0.009	0.012
18	1.50	0.10	0.022	(0.641)	0.009	0.012
19	1.58	0.10	0.022	(0.638)	0.009	0.012
20	1.67	0.10	0.022	(0.636)	0.009	0.012
21	1.75	0.10	0.022	(0.633)	0.009	0.012
22	1.83	0.13	0.029	(0.630)	0.012	0.016

23	1.92	0.13	0.029	(0.628)	0.012	0.016
24	2.00	0.13	0.029	(0.625)	0.012	0.016
25	2.08	0.13	0.029	(0.623)	0.012	0.016
26	2.17	0.13	0.029	(0.620)	0.012	0.016
27	2.25	0.13	0.029	(0.618)	0.012	0.016
28	2.33	0.13	0.029	(0.615)	0.012	0.016
29	2.42	0.13	0.029	(0.613)	0.012	0.016
30	2.50	0.13	0.029	(0.610)	0.012	0.016
31	2.58	0.17	0.036	(0.608)	0.016	0.020
32	2.67	0.17	0.036	(0.605)	0.016	0.020
33	2.75	0.17	0.036	(0.603)	0.016	0.020
34	2.83	0.17	0.036	(0.600)	0.016	0.020
35	2.92	0.17	0.036	(0.598)	0.016	0.020
36	3.00	0.17	0.036	(0.595)	0.016	0.020
37	3.08	0.17	0.036	(0.593)	0.016	0.020
38	3.17	0.17	0.036	(0.590)	0.016	0.020
39	3.25	0.17	0.036	(0.588)	0.016	0.020
40	3.33	0.17	0.036	(0.586)	0.016	0.020
41	3.42	0.17	0.036	(0.583)	0.016	0.020
42	3.50	0.17	0.036	(0.581)	0.016	0.020
43	3.58	0.17	0.036	(0.578)	0.016	0.020
44	3.67	0.17	0.036	(0.576)	0.016	0.020
45	3.75	0.17	0.036	(0.573)	0.016	0.020
46	3.83	0.20	0.043	(0.571)	0.019	0.025
47	3.92	0.20	0.043	(0.569)	0.019	0.025
48	4.00	0.20	0.043	(0.566)	0.019	0.025
49	4.08	0.20	0.043	(0.564)	0.019	0.025
50	4.17	0.20	0.043	(0.561)	0.019	0.025
51	4.25	0.20	0.043	(0.559)	0.019	0.025
52	4.33	0.23	0.050	(0.557)	0.022	0.029
53	4.42	0.23	0.050	(0.554)	0.022	0.029
54	4.50	0.23	0.050	(0.552)	0.022	0.029
55	4.58	0.23	0.050	(0.549)	0.022	0.029
56	4.67	0.23	0.050	(0.547)	0.022	0.029
57	4.75	0.23	0.050	(0.545)	0.022	0.029
58	4.83	0.27	0.058	(0.542)	0.025	0.033
59	4.92	0.27	0.058	(0.540)	0.025	0.033
60	5.00	0.27	0.058	(0.538)	0.025	0.033
61	5.08	0.20	0.043	(0.535)	0.019	0.025
62	5.17	0.20	0.043	(0.533)	0.019	0.025
63	5.25	0.20	0.043	(0.531)	0.019	0.025
64	5.33	0.23	0.050	(0.528)	0.022	0.029
65	5.42	0.23	0.050	(0.526)	0.022	0.029
66	5.50	0.23	0.050	(0.524)	0.022	0.029
67	5.58	0.27	0.058	(0.521)	0.025	0.033
68	5.67	0.27	0.058	(0.519)	0.025	0.033
69	5.75	0.27	0.058	(0.517)	0.025	0.033
70	5.83	0.27	0.058	(0.515)	0.025	0.033
71	5.92	0.27	0.058	(0.512)	0.025	0.033
72	6.00	0.27	0.058	(0.510)	0.025	0.033
73	6.08	0.30	0.065	(0.508)	0.028	0.037
74	6.17	0.30	0.065	(0.506)	0.028	0.037
75	6.25	0.30	0.065	(0.503)	0.028	0.037
76	6.33	0.30	0.065	(0.501)	0.028	0.037
77	6.42	0.30	0.065	(0.499)	0.028	0.037
78	6.50	0.30	0.065	(0.497)	0.028	0.037
79	6.58	0.33	0.072	(0.494)	0.031	0.041
80	6.67	0.33	0.072	(0.492)	0.031	0.041
81	6.75	0.33	0.072	(0.490)	0.031	0.041
82	6.83	0.33	0.072	(0.488)	0.031	0.041
83	6.92	0.33	0.072	(0.485)	0.031	0.041
84	7.00	0.33	0.072	(0.483)	0.031	0.041
85	7.08	0.33	0.072	(0.481)	0.031	0.041

86	7.17	0.33	0.072	(0.479)	0.031	0.041
87	7.25	0.33	0.072	(0.477)	0.031	0.041
88	7.33	0.37	0.079	(0.474)	0.034	0.045
89	7.42	0.37	0.079	(0.472)	0.034	0.045
90	7.50	0.37	0.079	(0.470)	0.034	0.045
91	7.58	0.40	0.086	(0.468)	0.037	0.049
92	7.67	0.40	0.086	(0.466)	0.037	0.049
93	7.75	0.40	0.086	(0.464)	0.037	0.049
94	7.83	0.43	0.094	(0.462)	0.040	0.053
95	7.92	0.43	0.094	(0.459)	0.040	0.053
96	8.00	0.43	0.094	(0.457)	0.040	0.053
97	8.08	0.50	0.108	(0.455)	0.047	0.061
98	8.17	0.50	0.108	(0.453)	0.047	0.061
99	8.25	0.50	0.108	(0.451)	0.047	0.061
100	8.33	0.50	0.108	(0.449)	0.047	0.061
101	8.42	0.50	0.108	(0.447)	0.047	0.061
102	8.50	0.50	0.108	(0.445)	0.047	0.061
103	8.58	0.53	0.115	(0.443)	0.050	0.066
104	8.67	0.53	0.115	(0.440)	0.050	0.066
105	8.75	0.53	0.115	(0.438)	0.050	0.066
106	8.83	0.57	0.122	(0.436)	0.053	0.070
107	8.92	0.57	0.122	(0.434)	0.053	0.070
108	9.00	0.57	0.122	(0.432)	0.053	0.070
109	9.08	0.63	0.137	(0.430)	0.059	0.078
110	9.17	0.63	0.137	(0.428)	0.059	0.078
111	9.25	0.63	0.137	(0.426)	0.059	0.078
112	9.33	0.67	0.144	(0.424)	0.062	0.082
113	9.42	0.67	0.144	(0.422)	0.062	0.082
114	9.50	0.67	0.144	(0.420)	0.062	0.082
115	9.58	0.70	0.151	(0.418)	0.065	0.086
116	9.67	0.70	0.151	(0.416)	0.065	0.086
117	9.75	0.70	0.151	(0.414)	0.065	0.086
118	9.83	0.73	0.158	(0.412)	0.068	0.090
119	9.92	0.73	0.158	(0.410)	0.068	0.090
120	10.00	0.73	0.158	(0.408)	0.068	0.090
121	10.08	0.50	0.108	(0.406)	0.047	0.061
122	10.17	0.50	0.108	(0.404)	0.047	0.061
123	10.25	0.50	0.108	(0.402)	0.047	0.061
124	10.33	0.50	0.108	(0.400)	0.047	0.061
125	10.42	0.50	0.108	(0.398)	0.047	0.061
126	10.50	0.50	0.108	(0.396)	0.047	0.061
127	10.58	0.67	0.144	(0.394)	0.062	0.082
128	10.67	0.67	0.144	(0.392)	0.062	0.082
129	10.75	0.67	0.144	(0.391)	0.062	0.082
130	10.83	0.67	0.144	(0.389)	0.062	0.082
131	10.92	0.67	0.144	(0.387)	0.062	0.082
132	11.00	0.67	0.144	(0.385)	0.062	0.082
133	11.08	0.63	0.137	(0.383)	0.059	0.078
134	11.17	0.63	0.137	(0.381)	0.059	0.078
135	11.25	0.63	0.137	(0.379)	0.059	0.078
136	11.33	0.63	0.137	(0.377)	0.059	0.078
137	11.42	0.63	0.137	(0.375)	0.059	0.078
138	11.50	0.63	0.137	(0.374)	0.059	0.078
139	11.58	0.57	0.122	(0.372)	0.053	0.070
140	11.67	0.57	0.122	(0.370)	0.053	0.070
141	11.75	0.57	0.122	(0.368)	0.053	0.070
142	11.83	0.60	0.130	(0.366)	0.056	0.074
143	11.92	0.60	0.130	(0.364)	0.056	0.074
144	12.00	0.60	0.130	(0.363)	0.056	0.074
145	12.08	0.83	0.180	(0.361)	0.078	0.102
146	12.17	0.83	0.180	(0.359)	0.078	0.102
147	12.25	0.83	0.180	(0.357)	0.078	0.102
148	12.33	0.87	0.187	(0.355)	0.081	0.106

149	12.42	0.87	0.187	(0.354)	0.081	0.106
150	12.50	0.87	0.187	(0.352)	0.081	0.106
151	12.58	0.93	0.202	(0.350)	0.087	0.115
152	12.67	0.93	0.202	(0.348)	0.087	0.115
153	12.75	0.93	0.202	(0.346)	0.087	0.115
154	12.83	0.97	0.209	(0.345)	0.090	0.119
155	12.92	0.97	0.209	(0.343)	0.090	0.119
156	13.00	0.97	0.209	(0.341)	0.090	0.119
157	13.08	1.13	0.245	(0.339)	0.106	0.139
158	13.17	1.13	0.245	(0.338)	0.106	0.139
159	13.25	1.13	0.245	(0.336)	0.106	0.139
160	13.33	1.13	0.245	(0.334)	0.106	0.139
161	13.42	1.13	0.245	(0.333)	0.106	0.139
162	13.50	1.13	0.245	(0.331)	0.106	0.139
163	13.58	0.77	0.166	(0.329)	0.071	0.094
164	13.67	0.77	0.166	(0.328)	0.071	0.094
165	13.75	0.77	0.166	(0.326)	0.071	0.094
166	13.83	0.77	0.166	(0.324)	0.071	0.094
167	13.92	0.77	0.166	(0.323)	0.071	0.094
168	14.00	0.77	0.166	(0.321)	0.071	0.094
169	14.08	0.90	0.194	(0.319)	0.084	0.111
170	14.17	0.90	0.194	(0.318)	0.084	0.111
171	14.25	0.90	0.194	(0.316)	0.084	0.111
172	14.33	0.87	0.187	(0.314)	0.081	0.106
173	14.42	0.87	0.187	(0.313)	0.081	0.106
174	14.50	0.87	0.187	(0.311)	0.081	0.106
175	14.58	0.87	0.187	(0.310)	0.081	0.106
176	14.67	0.87	0.187	(0.308)	0.081	0.106
177	14.75	0.87	0.187	(0.306)	0.081	0.106
178	14.83	0.83	0.180	(0.305)	0.078	0.102
179	14.92	0.83	0.180	(0.303)	0.078	0.102
180	15.00	0.83	0.180	(0.302)	0.078	0.102
181	15.08	0.80	0.173	(0.300)	0.075	0.098
182	15.17	0.80	0.173	(0.299)	0.075	0.098
183	15.25	0.80	0.173	(0.297)	0.075	0.098
184	15.33	0.77	0.166	(0.296)	0.071	0.094
185	15.42	0.77	0.166	(0.294)	0.071	0.094
186	15.50	0.77	0.166	(0.293)	0.071	0.094
187	15.58	0.63	0.137	(0.291)	0.059	0.078
188	15.67	0.63	0.137	(0.290)	0.059	0.078
189	15.75	0.63	0.137	(0.288)	0.059	0.078
190	15.83	0.63	0.137	(0.287)	0.059	0.078
191	15.92	0.63	0.137	(0.285)	0.059	0.078
192	16.00	0.63	0.137	(0.284)	0.059	0.078
193	16.08	0.13	0.029	(0.282)	0.012	0.016
194	16.17	0.13	0.029	(0.281)	0.012	0.016
195	16.25	0.13	0.029	(0.279)	0.012	0.016
196	16.33	0.13	0.029	(0.278)	0.012	0.016
197	16.42	0.13	0.029	(0.277)	0.012	0.016
198	16.50	0.13	0.029	(0.275)	0.012	0.016
199	16.58	0.10	0.022	(0.274)	0.009	0.012
200	16.67	0.10	0.022	(0.272)	0.009	0.012
201	16.75	0.10	0.022	(0.271)	0.009	0.012
202	16.83	0.10	0.022	(0.270)	0.009	0.012
203	16.92	0.10	0.022	(0.268)	0.009	0.012
204	17.00	0.10	0.022	(0.267)	0.009	0.012
205	17.08	0.17	0.036	(0.266)	0.016	0.020
206	17.17	0.17	0.036	(0.264)	0.016	0.020
207	17.25	0.17	0.036	(0.263)	0.016	0.020
208	17.33	0.17	0.036	(0.262)	0.016	0.020
209	17.42	0.17	0.036	(0.260)	0.016	0.020
210	17.50	0.17	0.036	(0.259)	0.016	0.020
211	17.58	0.17	0.036	(0.258)	0.016	0.020

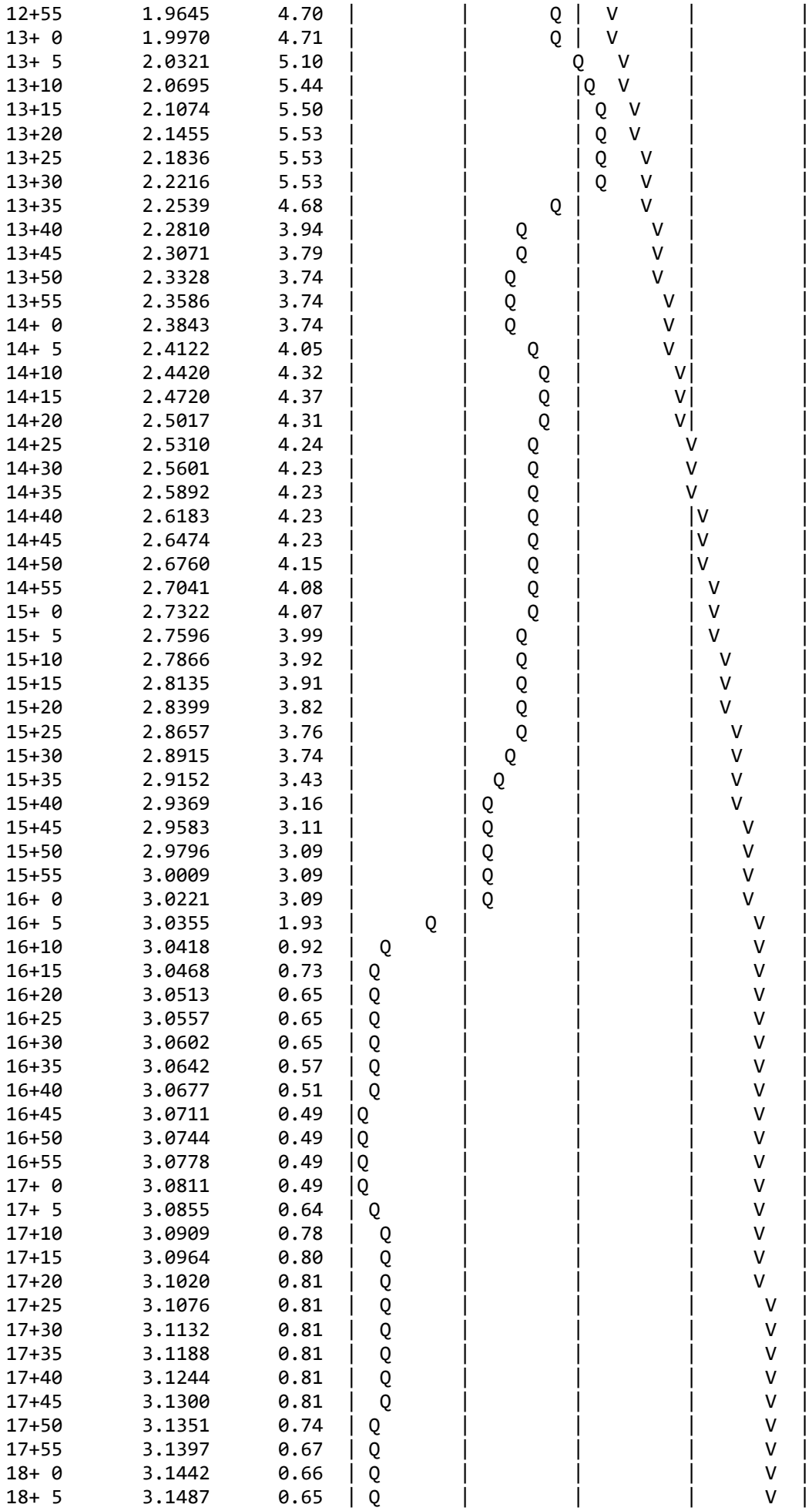
212	17.67	0.17	0.036	(0.256)	0.016	0.020
213	17.75	0.17	0.036	(0.255)	0.016	0.020
214	17.83	0.13	0.029	(0.254)	0.012	0.016
215	17.92	0.13	0.029	(0.253)	0.012	0.016
216	18.00	0.13	0.029	(0.251)	0.012	0.016
217	18.08	0.13	0.029	(0.250)	0.012	0.016
218	18.17	0.13	0.029	(0.249)	0.012	0.016
219	18.25	0.13	0.029	(0.248)	0.012	0.016
220	18.33	0.13	0.029	(0.246)	0.012	0.016
221	18.42	0.13	0.029	(0.245)	0.012	0.016
222	18.50	0.13	0.029	(0.244)	0.012	0.016
223	18.58	0.10	0.022	(0.243)	0.009	0.012
224	18.67	0.10	0.022	(0.242)	0.009	0.012
225	18.75	0.10	0.022	(0.241)	0.009	0.012
226	18.83	0.07	0.014	(0.239)	0.006	0.008
227	18.92	0.07	0.014	(0.238)	0.006	0.008
228	19.00	0.07	0.014	(0.237)	0.006	0.008
229	19.08	0.10	0.022	(0.236)	0.009	0.012
230	19.17	0.10	0.022	(0.235)	0.009	0.012
231	19.25	0.10	0.022	(0.234)	0.009	0.012
232	19.33	0.13	0.029	(0.233)	0.012	0.016
233	19.42	0.13	0.029	(0.232)	0.012	0.016
234	19.50	0.13	0.029	(0.231)	0.012	0.016
235	19.58	0.10	0.022	(0.229)	0.009	0.012
236	19.67	0.10	0.022	(0.228)	0.009	0.012
237	19.75	0.10	0.022	(0.227)	0.009	0.012
238	19.83	0.07	0.014	(0.226)	0.006	0.008
239	19.92	0.07	0.014	(0.225)	0.006	0.008
240	20.00	0.07	0.014	(0.224)	0.006	0.008
241	20.08	0.10	0.022	(0.223)	0.009	0.012
242	20.17	0.10	0.022	(0.222)	0.009	0.012
243	20.25	0.10	0.022	(0.221)	0.009	0.012
244	20.33	0.10	0.022	(0.220)	0.009	0.012
245	20.42	0.10	0.022	(0.220)	0.009	0.012
246	20.50	0.10	0.022	(0.219)	0.009	0.012
247	20.58	0.10	0.022	(0.218)	0.009	0.012
248	20.67	0.10	0.022	(0.217)	0.009	0.012
249	20.75	0.10	0.022	(0.216)	0.009	0.012
250	20.83	0.07	0.014	(0.215)	0.006	0.008
251	20.92	0.07	0.014	(0.214)	0.006	0.008
252	21.00	0.07	0.014	(0.213)	0.006	0.008
253	21.08	0.10	0.022	(0.212)	0.009	0.012
254	21.17	0.10	0.022	(0.212)	0.009	0.012
255	21.25	0.10	0.022	(0.211)	0.009	0.012
256	21.33	0.07	0.014	(0.210)	0.006	0.008
257	21.42	0.07	0.014	(0.209)	0.006	0.008
258	21.50	0.07	0.014	(0.208)	0.006	0.008
259	21.58	0.10	0.022	(0.208)	0.009	0.012
260	21.67	0.10	0.022	(0.207)	0.009	0.012
261	21.75	0.10	0.022	(0.206)	0.009	0.012
262	21.83	0.07	0.014	(0.205)	0.006	0.008
263	21.92	0.07	0.014	(0.205)	0.006	0.008
264	22.00	0.07	0.014	(0.204)	0.006	0.008
265	22.08	0.10	0.022	(0.203)	0.009	0.012
266	22.17	0.10	0.022	(0.203)	0.009	0.012
267	22.25	0.10	0.022	(0.202)	0.009	0.012
268	22.33	0.07	0.014	(0.201)	0.006	0.008
269	22.42	0.07	0.014	(0.201)	0.006	0.008
270	22.50	0.07	0.014	(0.200)	0.006	0.008
271	22.58	0.07	0.014	(0.200)	0.006	0.008
272	22.67	0.07	0.014	(0.199)	0.006	0.008
273	22.75	0.07	0.014	(0.199)	0.006	0.008
274	22.83	0.07	0.014	(0.198)	0.006	0.008

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275  22.92     0.07      0.014       (  0.197)       0.006        0.008
276  23.00     0.07      0.014       (  0.197)       0.006        0.008
277  23.08     0.07      0.014       (  0.197)       0.006        0.008
278  23.17     0.07      0.014       (  0.196)       0.006        0.008
279  23.25     0.07      0.014       (  0.196)       0.006        0.008
280  23.33     0.07      0.014       (  0.195)       0.006        0.008
281  23.42     0.07      0.014       (  0.195)       0.006        0.008
282  23.50     0.07      0.014       (  0.195)       0.006        0.008
283  23.58     0.07      0.014       (  0.194)       0.006        0.008
284  23.67     0.07      0.014       (  0.194)       0.006        0.008
285  23.75     0.07      0.014       (  0.194)       0.006        0.008
286  23.83     0.07      0.014       (  0.194)       0.006        0.008
287  23.92     0.07      0.014       (  0.193)       0.006        0.008
288  24.00     0.07      0.014       (  0.193)       0.006        0.008
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    12.3
       Flood volume = Effective rainfall      1.02(In)
        times area      39.4(Ac.)/[(In)/(Ft.)] =       3.4(Ac.Ft)
       Total soil loss =      0.78(In)
       Total soil loss =     2.546(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =      146308.9 Cubic Feet
       Total soil loss =      110914.9 Cubic Feet
       ------------------------------------------------------------------------
        Peak flow rate of this hydrograph =      5.527(CFS)
       ------------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0011      0.15  Q         |         |         |         |
   0+10       0.0031      0.29  VQ        |         |         |         |
   0+15       0.0052      0.32  VQ        |         |         |         |
   0+20       0.0080      0.40  VQ        |         |         |         |
   0+25       0.0112      0.47  VQ        |         |         |         |
   0+30       0.0146      0.48  VQ        |         |         |         |
   0+35       0.0179      0.49  VQ        |         |         |         |
   0+40       0.0213      0.49  VQ        |         |         |         |
   0+45       0.0246      0.49  VQ        |         |         |         |
   0+50       0.0285      0.56  V Q       |         |         |         |
   0+55       0.0329      0.63  V Q       |         |         |         |
   1+ 0       0.0373      0.65  V Q       |         |         |         |
   1+ 5       0.0413      0.57  V Q       |         |         |         |
   1+10       0.0447      0.51  V Q       |         |         |         |
   1+15       0.0481      0.49  VQ        |         |         |         |
   1+20       0.0515      0.49  VQ        |         |         |         |
   1+25       0.0549      0.49  VQ        |         |         |         |
   1+30       0.0582      0.49  VQ        |         |         |         |
   1+35       0.0616      0.49  VQ        |         |         |         |
   1+40       0.0649      0.49  VQ        |         |         |         |
   1+45       0.0683      0.49  VQ        |         |         |         |
   1+50       0.0722      0.56  V Q       |         |         |         |
   1+55       0.0765      0.63  V Q       |         |         |         |
   2+ 0       0.0810      0.65  V Q       |         |         |         |
   2+ 5       0.0855      0.65  |VQ       |         |         |         |
   2+10       0.0899      0.65  |VQ       |         |         |         |
   2+15       0.0944      0.65  |VQ       |         |         |         |
   2+20       0.0989      0.65  |VQ       |         |         |         |
```

2+25	0.1034	0.65	VQ			
2+30	0.1079	0.65	VQ			
2+35	0.1129	0.73	VQ			
2+40	0.1183	0.79	V Q			
2+45	0.1239	0.81	V Q			
2+50	0.1295	0.81	V Q			
2+55	0.1351	0.81	V Q			
3+ 0	0.1407	0.81	V Q			
3+ 5	0.1463	0.81	V Q			
3+10	0.1519	0.81	V Q			
3+15	0.1575	0.81	V Q			
3+20	0.1631	0.81	V Q			
3+25	0.1687	0.81	VQ			
3+30	0.1743	0.81	VQ			
3+35	0.1799	0.81	VQ			
3+40	0.1855	0.81	VQ			
3+45	0.1911	0.81	VQ			
3+50	0.1972	0.89	VQ			
3+55	0.2038	0.96	VQ			
4+ 0	0.2105	0.97	VQ			
4+ 5	0.2172	0.98	VQ			
4+10	0.2239	0.98	VQ			
4+15	0.2306	0.98	VQ			
4+20	0.2379	1.05	V Q			
4+25	0.2456	1.12	V Q			
4+30	0.2534	1.13	VQ			
4+35	0.2612	1.14	VQ			
4+40	0.2691	1.14	VQ			
4+45	0.2769	1.14	VQ			
4+50	0.2853	1.21	VQ			
4+55	0.2941	1.28	V Q			
5+ 0	0.3030	1.30	V Q			
5+ 5	0.3109	1.15	VQ			
5+10	0.3179	1.01	VQ			
5+15	0.3247	0.99	Q			
5+20	0.3319	1.05	VQ			
5+25	0.3396	1.12	Q			
5+30	0.3474	1.13	Q			
5+35	0.3558	1.21	Q			
5+40	0.3646	1.28	VQ			
5+45	0.3736	1.30	VQ			
5+50	0.3825	1.30	VQ			
5+55	0.3915	1.30	VQ			
6+ 0	0.4004	1.30	VQ			
6+ 5	0.4099	1.38	VQ			
6+10	0.4199	1.45	Q			
6+15	0.4299	1.46	Q			
6+20	0.4400	1.46	Q			
6+25	0.4501	1.46	Q			
6+30	0.4601	1.46	Q			
6+35	0.4708	1.54	VQ			
6+40	0.4818	1.61	VQ			
6+45	0.4930	1.62	VQ			
6+50	0.5042	1.63	Q			
6+55	0.5154	1.63	Q			
7+ 0	0.5266	1.63	Q			
7+ 5	0.5378	1.63	Q			
7+10	0.5490	1.63	Q			
7+15	0.5602	1.63	Q			
7+20	0.5719	1.70	Q			
7+25	0.5841	1.77	VQ			
7+30	0.5964	1.78	Q			
7+35	0.6092	1.87	Q			

7+40	0.6225	1.93	Q				
7+45	0.6359	1.95	Q				
7+50	0.6499	2.03	VQ				
7+55	0.6643	2.10	VQ				
8+ 0	0.6788	2.11	Q				
8+ 5	0.6944	2.27	VQ				
8+10	0.7110	2.40	VQ				
8+15	0.7277	2.43	VQ				
8+20	0.7445	2.44	VQ				
8+25	0.7613	2.44	Q				
8+30	0.7781	2.44	Q				
8+35	0.7954	2.52	VQ				
8+40	0.8132	2.58	VQ				
8+45	0.8311	2.60	VQ				
8+50	0.8495	2.68	Q				
8+55	0.8685	2.75	Q				
9+ 0	0.8874	2.76	VQ				
9+ 5	0.9075	2.92	VQ				
9+10	0.9286	3.05	VQ				
9+15	0.9498	3.08	VQ				
9+20	0.9716	3.17	VQ				
9+25	0.9938	3.23	VQ				
9+30	1.0162	3.25	Q				
9+35	1.0391	3.33	VQ				
9+40	1.0625	3.40	VQ				
9+45	1.0860	3.41	VQ				
9+50	1.1100	3.49	Q				
9+55	1.1345	3.56	VQ				
10+ 0	1.1591	3.57	VQ				
10+ 5	1.1801	3.04	Q V				
10+10	1.1977	2.56	Q V				
10+15	1.2147	2.47	Q V				
10+20	1.2315	2.44	Q V				
10+25	1.2483	2.44	Q V				
10+30	1.2651	2.44	Q V				
10+35	1.2846	2.82	Q V				
10+40	1.3063	3.16	Q V				
10+45	1.3286	3.23	Q V				
10+50	1.3510	3.25	Q V				
10+55	1.3734	3.25	Q V				
11+ 0	1.3957	3.25	Q V				
11+ 5	1.4176	3.17	Q V				
11+10	1.4390	3.11	Q V				
11+15	1.4603	3.09	Q V				
11+20	1.4816	3.09	Q V				
11+25	1.5029	3.09	Q V				
11+30	1.5241	3.09	Q V				
11+35	1.5443	2.93	Q V				
11+40	1.5636	2.80	Q V				
11+45	1.5827	2.77	Q V				
11+50	1.6023	2.84	Q V				
11+55	1.6223	2.91	Q V				
12+ 0	1.6424	2.92	Q V				
12+ 5	1.6663	3.46	Q V				
12+10	1.6934	3.94	Q V				
12+15	1.7212	4.03	Q V				
12+20	1.7497	4.14	Q V				
12+25	1.7787	4.21	Q V				
12+30	1.8077	4.22	Q V				
12+35	1.8379	4.38	Q V				
12+40	1.8690	4.52	Q V				
12+45	1.9003	4.54	Q V				
12+50	1.9322	4.63	Q V				



12+55	1.9645	4.70			Q	V	
13+ 0	1.9970	4.71			Q	V	
13+ 5	2.0321	5.10			Q	V	
13+10	2.0695	5.44			Q	V	
13+15	2.1074	5.50			Q	V	
13+20	2.1455	5.53			Q	V	
13+25	2.1836	5.53			Q	V	
13+30	2.2216	5.53			Q	V	
13+35	2.2539	4.68			Q	V	
13+40	2.2810	3.94		Q		V	
13+45	2.3071	3.79		Q		V	
13+50	2.3328	3.74		Q		V	
13+55	2.3586	3.74		Q		V	
14+ 0	2.3843	3.74		Q		V	
14+ 5	2.4122	4.05		Q		V	
14+10	2.4420	4.32		Q		V	
14+15	2.4720	4.37		Q		V	
14+20	2.5017	4.31		Q		V	
14+25	2.5310	4.24		Q		V	
14+30	2.5601	4.23		Q		V	
14+35	2.5892	4.23		Q		V	
14+40	2.6183	4.23		Q		V	
14+45	2.6474	4.23		Q		V	
14+50	2.6760	4.15		Q		V	
14+55	2.7041	4.08		Q		V	
15+ 0	2.7322	4.07		Q		V	
15+ 5	2.7596	3.99		Q		V	
15+10	2.7866	3.92		Q		V	
15+15	2.8135	3.91		Q		V	
15+20	2.8399	3.82		Q		V	
15+25	2.8657	3.76		Q		V	
15+30	2.8915	3.74		Q		V	
15+35	2.9152	3.43		Q		V	
15+40	2.9369	3.16		Q		V	
15+45	2.9583	3.11		Q		V	
15+50	2.9796	3.09		Q		V	
15+55	3.0009	3.09		Q		V	
16+ 0	3.0221	3.09		Q		V	
16+ 5	3.0355	1.93	Q			V	
16+10	3.0418	0.92	Q			V	
16+15	3.0468	0.73	Q			V	
16+20	3.0513	0.65	Q			V	
16+25	3.0557	0.65	Q			V	
16+30	3.0602	0.65	Q			V	
16+35	3.0642	0.57	Q			V	
16+40	3.0677	0.51	Q			V	
16+45	3.0711	0.49	Q			V	
16+50	3.0744	0.49	Q			V	
16+55	3.0778	0.49	Q			V	
17+ 0	3.0811	0.49	Q			V	
17+ 5	3.0855	0.64	Q			V	
17+10	3.0909	0.78	Q			V	
17+15	3.0964	0.80	Q			V	
17+20	3.1020	0.81	Q			V	
17+25	3.1076	0.81	Q			V	
17+30	3.1132	0.81	Q			V	
17+35	3.1188	0.81	Q			V	
17+40	3.1244	0.81	Q			V	
17+45	3.1300	0.81	Q			V	
17+50	3.1351	0.74	Q			V	
17+55	3.1397	0.67	Q			V	
18+ 0	3.1442	0.66	Q			V	
18+ 5	3.1487	0.65	Q			V	

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18+10       3.1532      0.65  | Q       |         |         |      V  |
18+15       3.1576      0.65  | Q       |         |         |      V  |
18+20       3.1621      0.65  | Q       |         |         |      V  |
18+25       3.1666      0.65  | Q       |         |         |      V  |
18+30       3.1711      0.65  | Q       |         |         |      V  |
18+35       3.1750      0.57  | Q       |         |         |      V  |
18+40       3.1785      0.51  | Q       |         |         |      V  |
18+45       3.1819      0.49  |Q        |         |         |      V  |
18+50       3.1847      0.41  |Q        |         |         |      V  |
18+55       3.1871      0.34  |Q        |         |         |      V  |
19+ 0       3.1894      0.33  |Q        |         |         |      V  |
19+ 5       3.1921      0.40  |Q        |         |         |       V |
19+10       3.1954      0.47  |Q        |         |         |       V |
19+15       3.1987      0.48  |Q        |         |         |       V |
19+20       3.2026      0.56  | Q       |         |         |       V |
19+25       3.2069      0.63  | Q       |         |         |       V |
19+30       3.2114      0.65  | Q       |         |         |       V |
19+35       3.2153      0.57  | Q       |         |         |       V |
19+40       3.2188      0.51  | Q       |         |         |       V |
19+45       3.2222      0.49  |Q        |         |         |       V |
19+50       3.2250      0.41  |Q        |         |         |       V |
19+55       3.2274      0.34  |Q        |         |         |       V |
20+ 0       3.2297      0.33  |Q        |         |         |       V |
20+ 5       3.2324      0.40  |Q        |         |         |       V |
20+10       3.2357      0.47  |Q        |         |         |       V |
20+15       3.2390      0.48  |Q        |         |         |       V |
20+20       3.2423      0.49  |Q        |         |         |       V |
20+25       3.2457      0.49  |Q        |         |         |       V |
20+30       3.2491      0.49  |Q        |         |         |       V |
20+35       3.2524      0.49  |Q        |         |         |       V |
20+40       3.2558      0.49  |Q        |         |         |       V |
20+45       3.2591      0.49  |Q        |         |         |       V |
20+50       3.2620      0.41  |Q        |         |         |       V |
20+55       3.2643      0.34  |Q        |         |         |       V |
21+ 0       3.2666      0.33  |Q        |         |         |       V |
21+ 5       3.2694      0.40  |Q        |         |         |       V |
21+10       3.2726      0.47  |Q        |         |         |       V |
21+15       3.2759      0.48  |Q        |         |         |        V|
21+20       3.2788      0.41  |Q        |         |         |        V|
21+25       3.2811      0.34  |Q        |         |         |        V|
21+30       3.2834      0.33  |Q        |         |         |        V|
21+35       3.2862      0.40  |Q        |         |         |        V|
21+40       3.2894      0.47  |Q        |         |         |        V|
21+45       3.2927      0.48  |Q        |         |         |        V|
21+50       3.2956      0.41  |Q        |         |         |        V|
21+55       3.2979      0.34  |Q        |         |         |        V|
22+ 0       3.3002      0.33  |Q        |         |         |        V|
22+ 5       3.3030      0.40  |Q        |         |         |        V|
22+10       3.3062      0.47  |Q        |         |         |        V|
22+15       3.3095      0.48  |Q        |         |         |        V|
22+20       3.3124      0.41  |Q        |         |         |        V|
22+25       3.3147      0.34  |Q        |         |         |        V|
22+30       3.3170      0.33  |Q        |         |         |        V|
22+35       3.3192      0.33  |Q        |         |         |        V|
22+40       3.3215      0.33  |Q        |         |         |        V|
22+45       3.3237      0.33  |Q        |         |         |        V|
22+50       3.3259      0.33  |Q        |         |         |        V|
22+55       3.3282      0.33  |Q        |         |         |        V|
23+ 0       3.3304      0.33  |Q        |         |         |        V|
23+ 5       3.3327      0.33  |Q        |         |         |        V|
23+10       3.3349      0.33  |Q        |         |         |        V|
23+15       3.3371      0.33  |Q        |         |         |        V|
23+20       3.3394      0.33  |Q        |         |         |        V|
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  23+25       3.3416      0.33  |Q        |         |         |        V|
  23+30       3.3439      0.33  |Q        |         |         |        V|
  23+35       3.3461      0.33  |Q        |         |         |        V|
  23+40       3.3483      0.33  |Q        |         |         |        V|
  23+45       3.3506      0.33  |Q        |         |         |        V|
  23+50       3.3528      0.33  |Q        |         |         |        V|
  23+55       3.3551      0.33  |Q        |         |         |        V|
  24+ 0       3.3573      0.33  |Q        |         |         |        V|
  24+ 5       3.3585      0.17  Q         |         |         |        V|
  24+10       3.3587      0.04  Q         |         |         |        V|
  24+15       3.3588      0.01  Q         |         |         |        V|
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 07/07/25 File: tcpa2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
BASIN A TRIBUTARY PROPOSED CONDITION
10-YEAR
24-HOUR

Drainage Area = 39.37(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.37(Ac.) = 0.062 Sq. Mi.
Length along longest watercourse = 3259.00(Ft.)
Length along longest watercourse measured to centroid = 352.00(Ft.)
Length along longest watercourse = 0.617 Mi.
Length along longest watercourse measured to centroid = 0.067 Mi.
Difference in elevation = 162.50(Ft.)
Slope along watercourse = 263.2709 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.037 Hr.
Lag time = 2.23 Min.
25% of lag time = 0.56 Min.
40% of lag time = 0.89 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.37	1.80	70.87

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.37	4.50	177.16

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
39.370	41.00	0.604

Total Area Entered = 39.37(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
41.0	41.0	0.660	0.604	0.301	1.000	0.301
					Sum (F) =	0.301

Area averaged mean soil loss (F) (In/Hr) = 0.301
Minimum soil loss rate ((In/Hr)) = 0.151
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.417

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	224.355	47.316	18.774
2	0.167	448.711	41.703	16.547
3	0.250	673.066	7.886	3.129
4	0.333	897.421	3.095	1.228
		Sum = 100.000	Sum=	39.678

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.534)	0.010	0.014
2	0.17	0.07	0.023	(0.532)	0.010	0.014
3	0.25	0.07	0.023	(0.530)	0.010	0.014
4	0.33	0.10	0.035	(0.528)	0.015	0.020
5	0.42	0.10	0.035	(0.526)	0.015	0.020
6	0.50	0.10	0.035	(0.524)	0.015	0.020
7	0.58	0.10	0.035	(0.522)	0.015	0.020
8	0.67	0.10	0.035	(0.520)	0.015	0.020
9	0.75	0.10	0.035	(0.518)	0.015	0.020
10	0.83	0.13	0.047	(0.516)	0.019	0.027
11	0.92	0.13	0.047	(0.514)	0.019	0.027
12	1.00	0.13	0.047	(0.512)	0.019	0.027
13	1.08	0.10	0.035	(0.510)	0.015	0.020
14	1.17	0.10	0.035	(0.508)	0.015	0.020
15	1.25	0.10	0.035	(0.506)	0.015	0.020
16	1.33	0.10	0.035	(0.504)	0.015	0.020
17	1.42	0.10	0.035	(0.502)	0.015	0.020
18	1.50	0.10	0.035	(0.500)	0.015	0.020
19	1.58	0.10	0.035	(0.498)	0.015	0.020
20	1.67	0.10	0.035	(0.496)	0.015	0.020
21	1.75	0.10	0.035	(0.494)	0.015	0.020
22	1.83	0.13	0.047	(0.492)	0.019	0.027

23	1.92	0.13	0.047	(0.490)	0.019	0.027
24	2.00	0.13	0.047	(0.488)	0.019	0.027
25	2.08	0.13	0.047	(0.486)	0.019	0.027
26	2.17	0.13	0.047	(0.484)	0.019	0.027
27	2.25	0.13	0.047	(0.482)	0.019	0.027
28	2.33	0.13	0.047	(0.480)	0.019	0.027
29	2.42	0.13	0.047	(0.478)	0.019	0.027
30	2.50	0.13	0.047	(0.476)	0.019	0.027
31	2.58	0.17	0.058	(0.474)	0.024	0.034
32	2.67	0.17	0.058	(0.472)	0.024	0.034
33	2.75	0.17	0.058	(0.470)	0.024	0.034
34	2.83	0.17	0.058	(0.468)	0.024	0.034
35	2.92	0.17	0.058	(0.466)	0.024	0.034
36	3.00	0.17	0.058	(0.464)	0.024	0.034
37	3.08	0.17	0.058	(0.462)	0.024	0.034
38	3.17	0.17	0.058	(0.460)	0.024	0.034
39	3.25	0.17	0.058	(0.458)	0.024	0.034
40	3.33	0.17	0.058	(0.457)	0.024	0.034
41	3.42	0.17	0.058	(0.455)	0.024	0.034
42	3.50	0.17	0.058	(0.453)	0.024	0.034
43	3.58	0.17	0.058	(0.451)	0.024	0.034
44	3.67	0.17	0.058	(0.449)	0.024	0.034
45	3.75	0.17	0.058	(0.447)	0.024	0.034
46	3.83	0.20	0.070	(0.445)	0.029	0.041
47	3.92	0.20	0.070	(0.443)	0.029	0.041
48	4.00	0.20	0.070	(0.441)	0.029	0.041
49	4.08	0.20	0.070	(0.440)	0.029	0.041
50	4.17	0.20	0.070	(0.438)	0.029	0.041
51	4.25	0.20	0.070	(0.436)	0.029	0.041
52	4.33	0.23	0.081	(0.434)	0.034	0.048
53	4.42	0.23	0.081	(0.432)	0.034	0.048
54	4.50	0.23	0.081	(0.430)	0.034	0.048
55	4.58	0.23	0.081	(0.428)	0.034	0.048
56	4.67	0.23	0.081	(0.427)	0.034	0.048
57	4.75	0.23	0.081	(0.425)	0.034	0.048
58	4.83	0.27	0.093	(0.423)	0.039	0.054
59	4.92	0.27	0.093	(0.421)	0.039	0.054
60	5.00	0.27	0.093	(0.419)	0.039	0.054
61	5.08	0.20	0.070	(0.417)	0.029	0.041
62	5.17	0.20	0.070	(0.416)	0.029	0.041
63	5.25	0.20	0.070	(0.414)	0.029	0.041
64	5.33	0.23	0.081	(0.412)	0.034	0.048
65	5.42	0.23	0.081	(0.410)	0.034	0.048
66	5.50	0.23	0.081	(0.408)	0.034	0.048
67	5.58	0.27	0.093	(0.407)	0.039	0.054
68	5.67	0.27	0.093	(0.405)	0.039	0.054
69	5.75	0.27	0.093	(0.403)	0.039	0.054
70	5.83	0.27	0.093	(0.401)	0.039	0.054
71	5.92	0.27	0.093	(0.400)	0.039	0.054
72	6.00	0.27	0.093	(0.398)	0.039	0.054
73	6.08	0.30	0.105	(0.396)	0.044	0.061
74	6.17	0.30	0.105	(0.394)	0.044	0.061
75	6.25	0.30	0.105	(0.392)	0.044	0.061
76	6.33	0.30	0.105	(0.391)	0.044	0.061
77	6.42	0.30	0.105	(0.389)	0.044	0.061
78	6.50	0.30	0.105	(0.387)	0.044	0.061
79	6.58	0.33	0.116	(0.385)	0.049	0.068
80	6.67	0.33	0.116	(0.384)	0.049	0.068
81	6.75	0.33	0.116	(0.382)	0.049	0.068
82	6.83	0.33	0.116	(0.380)	0.049	0.068
83	6.92	0.33	0.116	(0.379)	0.049	0.068
84	7.00	0.33	0.116	(0.377)	0.049	0.068
85	7.08	0.33	0.116	(0.375)	0.049	0.068

86	7.17	0.33	0.116	(0.373)	0.049	0.068
87	7.25	0.33	0.116	(0.372)	0.049	0.068
88	7.33	0.37	0.128	(0.370)	0.053	0.075
89	7.42	0.37	0.128	(0.368)	0.053	0.075
90	7.50	0.37	0.128	(0.367)	0.053	0.075
91	7.58	0.40	0.140	(0.365)	0.058	0.081
92	7.67	0.40	0.140	(0.363)	0.058	0.081
93	7.75	0.40	0.140	(0.362)	0.058	0.081
94	7.83	0.43	0.151	(0.360)	0.063	0.088
95	7.92	0.43	0.151	(0.358)	0.063	0.088
96	8.00	0.43	0.151	(0.357)	0.063	0.088
97	8.08	0.50	0.175	(0.355)	0.073	0.102
98	8.17	0.50	0.175	(0.353)	0.073	0.102
99	8.25	0.50	0.175	(0.352)	0.073	0.102
100	8.33	0.50	0.175	(0.350)	0.073	0.102
101	8.42	0.50	0.175	(0.348)	0.073	0.102
102	8.50	0.50	0.175	(0.347)	0.073	0.102
103	8.58	0.53	0.186	(0.345)	0.078	0.109
104	8.67	0.53	0.186	(0.343)	0.078	0.109
105	8.75	0.53	0.186	(0.342)	0.078	0.109
106	8.83	0.57	0.198	(0.340)	0.082	0.115
107	8.92	0.57	0.198	(0.339)	0.082	0.115
108	9.00	0.57	0.198	(0.337)	0.082	0.115
109	9.08	0.63	0.221	(0.335)	0.092	0.129
110	9.17	0.63	0.221	(0.334)	0.092	0.129
111	9.25	0.63	0.221	(0.332)	0.092	0.129
112	9.33	0.67	0.233	(0.331)	0.097	0.136
113	9.42	0.67	0.233	(0.329)	0.097	0.136
114	9.50	0.67	0.233	(0.328)	0.097	0.136
115	9.58	0.70	0.244	(0.326)	0.102	0.143
116	9.67	0.70	0.244	(0.324)	0.102	0.143
117	9.75	0.70	0.244	(0.323)	0.102	0.143
118	9.83	0.73	0.256	(0.321)	0.107	0.149
119	9.92	0.73	0.256	(0.320)	0.107	0.149
120	10.00	0.73	0.256	(0.318)	0.107	0.149
121	10.08	0.50	0.175	(0.317)	0.073	0.102
122	10.17	0.50	0.175	(0.315)	0.073	0.102
123	10.25	0.50	0.175	(0.314)	0.073	0.102
124	10.33	0.50	0.175	(0.312)	0.073	0.102
125	10.42	0.50	0.175	(0.311)	0.073	0.102
126	10.50	0.50	0.175	(0.309)	0.073	0.102
127	10.58	0.67	0.233	(0.308)	0.097	0.136
128	10.67	0.67	0.233	(0.306)	0.097	0.136
129	10.75	0.67	0.233	(0.305)	0.097	0.136
130	10.83	0.67	0.233	(0.303)	0.097	0.136
131	10.92	0.67	0.233	(0.302)	0.097	0.136
132	11.00	0.67	0.233	(0.300)	0.097	0.136
133	11.08	0.63	0.221	(0.299)	0.092	0.129
134	11.17	0.63	0.221	(0.297)	0.092	0.129
135	11.25	0.63	0.221	(0.296)	0.092	0.129
136	11.33	0.63	0.221	(0.294)	0.092	0.129
137	11.42	0.63	0.221	(0.293)	0.092	0.129
138	11.50	0.63	0.221	(0.291)	0.092	0.129
139	11.58	0.57	0.198	(0.290)	0.082	0.115
140	11.67	0.57	0.198	(0.288)	0.082	0.115
141	11.75	0.57	0.198	(0.287)	0.082	0.115
142	11.83	0.60	0.210	(0.286)	0.087	0.122
143	11.92	0.60	0.210	(0.284)	0.087	0.122
144	12.00	0.60	0.210	(0.283)	0.087	0.122
145	12.08	0.83	0.291	(0.281)	0.121	0.170
146	12.17	0.83	0.291	(0.280)	0.121	0.170
147	12.25	0.83	0.291	(0.278)	0.121	0.170
148	12.33	0.87	0.303	(0.277)	0.126	0.177

149	12.42	0.87	0.303	(0.276)	0.126	0.177
150	12.50	0.87	0.303	(0.274)	0.126	0.177
151	12.58	0.93	0.326	(0.273)	0.136	0.190
152	12.67	0.93	0.326	(0.272)	0.136	0.190
153	12.75	0.93	0.326	(0.270)	0.136	0.190
154	12.83	0.97	0.338	(0.269)	0.141	0.197
155	12.92	0.97	0.338	(0.267)	0.141	0.197
156	13.00	0.97	0.338	(0.266)	0.141	0.197
157	13.08	1.13	0.396	(0.265)	0.165	0.231
158	13.17	1.13	0.396	(0.263)	0.165	0.231
159	13.25	1.13	0.396	(0.262)	0.165	0.231
160	13.33	1.13	0.396	(0.261)	0.165	0.231
161	13.42	1.13	0.396	(0.259)	0.165	0.231
162	13.50	1.13	0.396	(0.258)	0.165	0.231
163	13.58	0.77	0.268	(0.257)	0.112	0.156
164	13.67	0.77	0.268	(0.255)	0.112	0.156
165	13.75	0.77	0.268	(0.254)	0.112	0.156
166	13.83	0.77	0.268	(0.253)	0.112	0.156
167	13.92	0.77	0.268	(0.252)	0.112	0.156
168	14.00	0.77	0.268	(0.250)	0.112	0.156
169	14.08	0.90	0.314	(0.249)	0.131	0.183
170	14.17	0.90	0.314	(0.248)	0.131	0.183
171	14.25	0.90	0.314	(0.246)	0.131	0.183
172	14.33	0.87	0.303	(0.245)	0.126	0.177
173	14.42	0.87	0.303	(0.244)	0.126	0.177
174	14.50	0.87	0.303	(0.243)	0.126	0.177
175	14.58	0.87	0.303	(0.241)	0.126	0.177
176	14.67	0.87	0.303	(0.240)	0.126	0.177
177	14.75	0.87	0.303	(0.239)	0.126	0.177
178	14.83	0.83	0.291	(0.238)	0.121	0.170
179	14.92	0.83	0.291	(0.237)	0.121	0.170
180	15.00	0.83	0.291	(0.235)	0.121	0.170
181	15.08	0.80	0.279	(0.234)	0.116	0.163
182	15.17	0.80	0.279	(0.233)	0.116	0.163
183	15.25	0.80	0.279	(0.232)	0.116	0.163
184	15.33	0.77	0.268	(0.231)	0.112	0.156
185	15.42	0.77	0.268	(0.229)	0.112	0.156
186	15.50	0.77	0.268	(0.228)	0.112	0.156
187	15.58	0.63	0.221	(0.227)	0.092	0.129
188	15.67	0.63	0.221	(0.226)	0.092	0.129
189	15.75	0.63	0.221	(0.225)	0.092	0.129
190	15.83	0.63	0.221	(0.224)	0.092	0.129
191	15.92	0.63	0.221	(0.222)	0.092	0.129
192	16.00	0.63	0.221	(0.221)	0.092	0.129
193	16.08	0.13	0.047	(0.220)	0.019	0.027
194	16.17	0.13	0.047	(0.219)	0.019	0.027
195	16.25	0.13	0.047	(0.218)	0.019	0.027
196	16.33	0.13	0.047	(0.217)	0.019	0.027
197	16.42	0.13	0.047	(0.216)	0.019	0.027
198	16.50	0.13	0.047	(0.215)	0.019	0.027
199	16.58	0.10	0.035	(0.213)	0.015	0.020
200	16.67	0.10	0.035	(0.212)	0.015	0.020
201	16.75	0.10	0.035	(0.211)	0.015	0.020
202	16.83	0.10	0.035	(0.210)	0.015	0.020
203	16.92	0.10	0.035	(0.209)	0.015	0.020
204	17.00	0.10	0.035	(0.208)	0.015	0.020
205	17.08	0.17	0.058	(0.207)	0.024	0.034
206	17.17	0.17	0.058	(0.206)	0.024	0.034
207	17.25	0.17	0.058	(0.205)	0.024	0.034
208	17.33	0.17	0.058	(0.204)	0.024	0.034
209	17.42	0.17	0.058	(0.203)	0.024	0.034
210	17.50	0.17	0.058	(0.202)	0.024	0.034
211	17.58	0.17	0.058	(0.201)	0.024	0.034

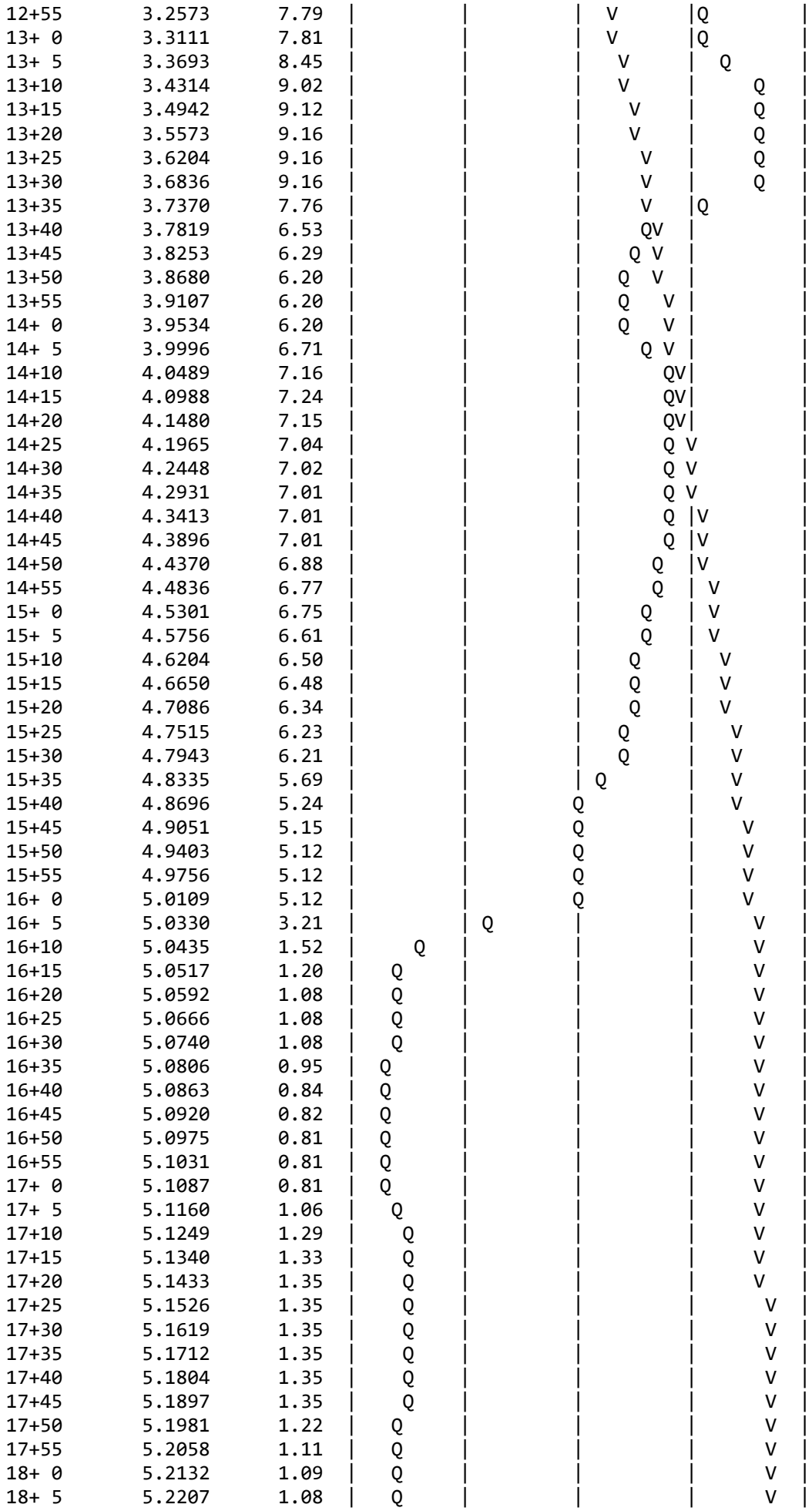
212	17.67	0.17	0.058	(0.200)	0.024	0.034
213	17.75	0.17	0.058	(0.199)	0.024	0.034
214	17.83	0.13	0.047	(0.198)	0.019	0.027
215	17.92	0.13	0.047	(0.197)	0.019	0.027
216	18.00	0.13	0.047	(0.196)	0.019	0.027
217	18.08	0.13	0.047	(0.195)	0.019	0.027
218	18.17	0.13	0.047	(0.194)	0.019	0.027
219	18.25	0.13	0.047	(0.193)	0.019	0.027
220	18.33	0.13	0.047	(0.192)	0.019	0.027
221	18.42	0.13	0.047	(0.191)	0.019	0.027
222	18.50	0.13	0.047	(0.190)	0.019	0.027
223	18.58	0.10	0.035	(0.189)	0.015	0.020
224	18.67	0.10	0.035	(0.188)	0.015	0.020
225	18.75	0.10	0.035	(0.188)	0.015	0.020
226	18.83	0.07	0.023	(0.187)	0.010	0.014
227	18.92	0.07	0.023	(0.186)	0.010	0.014
228	19.00	0.07	0.023	(0.185)	0.010	0.014
229	19.08	0.10	0.035	(0.184)	0.015	0.020
230	19.17	0.10	0.035	(0.183)	0.015	0.020
231	19.25	0.10	0.035	(0.182)	0.015	0.020
232	19.33	0.13	0.047	(0.181)	0.019	0.027
233	19.42	0.13	0.047	(0.181)	0.019	0.027
234	19.50	0.13	0.047	(0.180)	0.019	0.027
235	19.58	0.10	0.035	(0.179)	0.015	0.020
236	19.67	0.10	0.035	(0.178)	0.015	0.020
237	19.75	0.10	0.035	(0.177)	0.015	0.020
238	19.83	0.07	0.023	(0.177)	0.010	0.014
239	19.92	0.07	0.023	(0.176)	0.010	0.014
240	20.00	0.07	0.023	(0.175)	0.010	0.014
241	20.08	0.10	0.035	(0.174)	0.015	0.020
242	20.17	0.10	0.035	(0.173)	0.015	0.020
243	20.25	0.10	0.035	(0.173)	0.015	0.020
244	20.33	0.10	0.035	(0.172)	0.015	0.020
245	20.42	0.10	0.035	(0.171)	0.015	0.020
246	20.50	0.10	0.035	(0.170)	0.015	0.020
247	20.58	0.10	0.035	(0.170)	0.015	0.020
248	20.67	0.10	0.035	(0.169)	0.015	0.020
249	20.75	0.10	0.035	(0.168)	0.015	0.020
250	20.83	0.07	0.023	(0.168)	0.010	0.014
251	20.92	0.07	0.023	(0.167)	0.010	0.014
252	21.00	0.07	0.023	(0.166)	0.010	0.014
253	21.08	0.10	0.035	(0.166)	0.015	0.020
254	21.17	0.10	0.035	(0.165)	0.015	0.020
255	21.25	0.10	0.035	(0.164)	0.015	0.020
256	21.33	0.07	0.023	(0.164)	0.010	0.014
257	21.42	0.07	0.023	(0.163)	0.010	0.014
258	21.50	0.07	0.023	(0.163)	0.010	0.014
259	21.58	0.10	0.035	(0.162)	0.015	0.020
260	21.67	0.10	0.035	(0.161)	0.015	0.020
261	21.75	0.10	0.035	(0.161)	0.015	0.020
262	21.83	0.07	0.023	(0.160)	0.010	0.014
263	21.92	0.07	0.023	(0.160)	0.010	0.014
264	22.00	0.07	0.023	(0.159)	0.010	0.014
265	22.08	0.10	0.035	(0.159)	0.015	0.020
266	22.17	0.10	0.035	(0.158)	0.015	0.020
267	22.25	0.10	0.035	(0.158)	0.015	0.020
268	22.33	0.07	0.023	(0.157)	0.010	0.014
269	22.42	0.07	0.023	(0.157)	0.010	0.014
270	22.50	0.07	0.023	(0.156)	0.010	0.014
271	22.58	0.07	0.023	(0.156)	0.010	0.014
272	22.67	0.07	0.023	(0.155)	0.010	0.014
273	22.75	0.07	0.023	(0.155)	0.010	0.014
274	22.83	0.07	0.023	(0.154)	0.010	0.014

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275  22.92     0.07      0.023       (  0.154)       0.010        0.014
276  23.00     0.07      0.023       (  0.154)       0.010        0.014
277  23.08     0.07      0.023       (  0.153)       0.010        0.014
278  23.17     0.07      0.023       (  0.153)       0.010        0.014
279  23.25     0.07      0.023       (  0.153)       0.010        0.014
280  23.33     0.07      0.023       (  0.152)       0.010        0.014
281  23.42     0.07      0.023       (  0.152)       0.010        0.014
282  23.50     0.07      0.023       (  0.152)       0.010        0.014
283  23.58     0.07      0.023       (  0.151)       0.010        0.014
284  23.67     0.07      0.023       (  0.151)       0.010        0.014
285  23.75     0.07      0.023       (  0.151)       0.010        0.014
286  23.83     0.07      0.023       (  0.151)       0.010        0.014
287  23.92     0.07      0.023       (  0.151)       0.010        0.014
288  24.00     0.07      0.023       (  0.151)       0.010        0.014
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    20.4
       Flood volume = Effective rainfall      1.70(In)
        times area      39.4(Ac.)/[(In)/(Ft.)] =       5.6(Ac.Ft)
       Total soil loss =      1.21(In)
       Total soil loss =     3.980(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =      242587.7 Cubic Feet
       Total soil loss =      173372.0 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      9.164(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0018      0.26  VQ        |         |         |         |
   0+10       0.0051      0.48  VQ        |         |         |         |
   0+15       0.0087      0.52  V Q       |         |         |         |
   0+20       0.0133      0.67  V Q       |         |         |         |
   0+25       0.0186      0.78  V  Q      |         |         |         |
   0+30       0.0241      0.80  V  Q      |         |         |         |
   0+35       0.0297      0.81  V  Q      |         |         |         |
   0+40       0.0353      0.81  V  Q      |         |         |         |
   0+45       0.0408      0.81  V  Q      |         |         |         |
   0+50       0.0473      0.94  V  Q      |         |         |         |
   0+55       0.0545      1.05  V   Q     |         |         |         |
   1+ 0       0.0619      1.07  V   Q     |         |         |         |
   1+ 5       0.0684      0.95  V  Q      |         |         |         |
   1+10       0.0742      0.84  V  Q      |         |         |         |
   1+15       0.0798      0.82  V  Q      |         |         |         |
   1+20       0.0854      0.81  V  Q      |         |         |         |
   1+25       0.0910      0.81  V  Q      |         |         |         |
   1+30       0.0965      0.81  V  Q      |         |         |         |
   1+35       0.1021      0.81  V  Q      |         |         |         |
   1+40       0.1077      0.81  V  Q      |         |         |         |
   1+45       0.1132      0.81  V  Q      |         |         |         |
   1+50       0.1197      0.94  V  Q      |         |         |         |
   1+55       0.1269      1.05  V   Q     |         |         |         |
   2+ 0       0.1343      1.07  V   Q     |         |         |         |
   2+ 5       0.1417      1.08  |V  Q     |         |         |         |
   2+10       0.1491      1.08  |V  Q     |         |         |         |
   2+15       0.1565      1.08  |V  Q     |         |         |         |
   2+20       0.1640      1.08  |V  Q     |         |         |         |
```

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2+25       0.1714      1.08  |V  Q     |          |          |          |
2+30       0.1788      1.08  |V  Q     |          |          |          |
2+35       0.1871      1.21  |V  Q     |          |          |          |
2+40       0.1962      1.32  |V   Q    |          |          |          |
2+45       0.2054      1.34  |V   Q    |          |          |          |
2+50       0.2147      1.35  |V   Q    |          |          |          |
2+55       0.2240      1.35  |V   Q    |          |          |          |
3+ 0       0.2333      1.35  |V   Q    |          |          |          |
3+ 5       0.2426      1.35  |V   Q    |          |          |          |
3+10       0.2518      1.35  |V   Q    |          |          |          |
3+15       0.2611      1.35  |V   Q    |          |          |          |
3+20       0.2704      1.35  |V   Q    |          |          |          |
3+25       0.2797      1.35  | V  Q    |          |          |          |
3+30       0.2890      1.35  | V  Q    |          |          |          |
3+35       0.2982      1.35  | V  Q    |          |          |          |
3+40       0.3075      1.35  | V  Q    |          |          |          |
3+45       0.3168      1.35  | V  Q    |          |          |          |
3+50       0.3270      1.48  | V  Q    |          |          |          |
3+55       0.3379      1.59  | V   Q   |          |          |          |
4+ 0       0.3490      1.61  | V   Q   |          |          |          |
4+ 5       0.3601      1.62  | V   Q   |          |          |          |
4+10       0.3713      1.62  | V   Q   |          |          |          |
4+15       0.3824      1.62  | V   Q   |          |          |          |
4+20       0.3944      1.74  | V   Q   |          |          |          |
4+25       0.4072      1.86  | V    Q  |          |          |          |
4+30       0.4201      1.88  |  V   Q  |          |          |          |
4+35       0.4331      1.89  |  V   Q  |          |          |          |
4+40       0.4461      1.89  |  V   Q  |          |          |          |
4+45       0.4591      1.89  |  V   Q  |          |          |          |
4+50       0.4730      2.01  |  V    Q |          |          |          |
4+55       0.4876      2.13  |  V    Q |          |          |          |
5+ 0       0.5024      2.15  |  V    Q |          |          |          |
5+ 5       0.5155      1.90  |  V   Q  |          |          |          |
5+10       0.5271      1.68  |  V  Q   |          |          |          |
5+15       0.5383      1.63  |  V  Q   |          |          |          |
5+20       0.5503      1.74  |  V  Q   |          |          |          |
5+25       0.5631      1.86  |   V  Q  |          |          |          |
5+30       0.5761      1.88  |   V  Q  |          |          |          |
5+35       0.5899      2.01  |   V   Q |          |          |          |
5+40       0.6046      2.13  |   V   Q |          |          |          |
5+45       0.6194      2.15  |   V   Q |          |          |          |
5+50       0.6342      2.16  |   V   Q |          |          |          |
5+55       0.6491      2.16  |   V   Q |          |          |          |
6+ 0       0.6639      2.16  |   V   Q |          |          |          |
6+ 5       0.6797      2.28  |   V    Q|          |          |          |
6+10       0.6962      2.40  |    V   Q|          |          |          |
6+15       0.7128      2.42  |    V   Q|          |          |          |
6+20       0.7295      2.43  |    V   Q|          |          |          |
6+25       0.7462      2.43  |    V   Q|          |          |          |
6+30       0.7629      2.43  |    V   Q|          |          |          |
6+35       0.7805      2.55  |    V    Q          |          |          |
6+40       0.7989      2.67  |    V    Q          |          |          |
6+45       0.8174      2.69  |    V    Q          |          |          |
6+50       0.8360      2.70  |     V   Q          |          |          |
6+55       0.8545      2.70  |     V   Q          |          |          |
7+ 0       0.8731      2.70  |     V   Q          |          |          |
7+ 5       0.8916      2.70  |     V   Q          |          |          |
7+10       0.9102      2.70  |     V   Q          |          |          |
7+15       0.9288      2.70  |     V   Q          |          |          |
7+20       0.9482      2.82  |     V   |Q         |          |          |
7+25       0.9684      2.94  |     V   |Q         |          |          |
7+30       0.9888      2.96  |      V  |Q         |          |          |
7+35       1.0101      3.09  |      V  | Q        |          |          |
```

7+40	1.0322	3.20	V	Q			
7+45	1.0544	3.23	V	Q			
7+50	1.0775	3.36	V	Q			
7+55	1.1015	3.47	V	Q			
8+ 0	1.1255	3.50	V	Q			
8+ 5	1.1514	3.76	V	Q			
8+10	1.1789	3.98	V	Q			
8+15	1.2066	4.03	V	Q			
8+20	1.2344	4.04	V	Q			
8+25	1.2623	4.04	V	Q			
8+30	1.2901	4.04	V	Q			
8+35	1.3189	4.17	V	Q			
8+40	1.3484	4.28	V	Q			
8+45	1.3780	4.30	V	Q			
8+50	1.4086	4.44	V	Q			
8+55	1.4399	4.55	V	Q			
9+ 0	1.4714	4.57	V	Q			
9+ 5	1.5048	4.84	V	Q			
9+10	1.5396	5.06	V	Q			
9+15	1.5748	5.10	V	Q			
9+20	1.6109	5.25	V	Q			
9+25	1.6478	5.36	V	Q			
9+30	1.6849	5.38	V	Q			
9+35	1.7229	5.52	V	Q			
9+40	1.7617	5.63	V	Q			
9+45	1.8006	5.65	V	Q			
9+50	1.8405	5.79	V	Q			
9+55	1.8811	5.90	V	Q			
10+ 0	1.9219	5.92	V	Q			
10+ 5	1.9566	5.04	V	Q			
10+10	1.9859	4.25	V	Q			
10+15	2.0141	4.10	V	Q			
10+20	2.0420	4.04	V	Q			
10+25	2.0698	4.04	V	Q			
10+30	2.0976	4.04	V	Q			
10+35	2.1299	4.68	V	Q			
10+40	2.1660	5.24	V	Q			
10+45	2.2028	5.35	V	Q			
10+50	2.2400	5.39	V	Q			
10+55	2.2771	5.39	V	Q			
11+ 0	2.3142	5.39	V	Q			
11+ 5	2.3505	5.26	V	Q			
11+10	2.3859	5.15	V	Q			
11+15	2.4213	5.13	V	Q			
11+20	2.4565	5.12	V	Q			
11+25	2.4918	5.12	V	Q			
11+30	2.5271	5.12	V	Q			
11+35	2.5606	4.87	V	Q			
11+40	2.5926	4.64	V	Q			
11+45	2.6242	4.60	V	Q			
11+50	2.6567	4.71	V	Q			
11+55	2.6899	4.82	V	Q			
12+ 0	2.7232	4.84	V	Q			
12+ 5	2.7628	5.74	V	Q			
12+10	2.8078	6.53	V	Q			
12+15	2.8538	6.68	V	Q			
12+20	2.9011	6.87	V	Q			
12+25	2.9491	6.98	V	Q			
12+30	2.9973	7.00	V	Q			
12+35	3.0474	7.26	V	Q			
12+40	3.0989	7.49	V	Q			
12+45	3.1508	7.53	V	Q			
12+50	3.2037	7.67	V	Q			



12+55	3.2573	7.79			V	Q		
13+ 0	3.3111	7.81			V	Q		
13+ 5	3.3693	8.45			V	Q		
13+10	3.4314	9.02			V	Q		
13+15	3.4942	9.12			V	Q		
13+20	3.5573	9.16			V	Q		
13+25	3.6204	9.16			V	Q		
13+30	3.6836	9.16			V	Q		
13+35	3.7370	7.76			V	Q		
13+40	3.7819	6.53			QV			
13+45	3.8253	6.29			Q V			
13+50	3.8680	6.20			Q V			
13+55	3.9107	6.20			Q V			
14+ 0	3.9534	6.20			Q V			
14+ 5	3.9996	6.71			Q V			
14+10	4.0489	7.16			QV			
14+15	4.0988	7.24			QV			
14+20	4.1480	7.15			QV			
14+25	4.1965	7.04			Q V			
14+30	4.2448	7.02			Q V			
14+35	4.2931	7.01			Q V			
14+40	4.3413	7.01			Q V			
14+45	4.3896	7.01			Q V			
14+50	4.4370	6.88			Q V			
14+55	4.4836	6.77			Q V			
15+ 0	4.5301	6.75			Q V			
15+ 5	4.5756	6.61			Q V			
15+10	4.6204	6.50			Q V			
15+15	4.6650	6.48			Q V			
15+20	4.7086	6.34			Q V			
15+25	4.7515	6.23			Q V			
15+30	4.7943	6.21			Q V			
15+35	4.8335	5.69			Q V			
15+40	4.8696	5.24			Q V			
15+45	4.9051	5.15			Q V			
15+50	4.9403	5.12			Q V			
15+55	4.9756	5.12			Q V			
16+ 0	5.0109	5.12			Q V			
16+ 5	5.0330	3.21		Q	V			
16+10	5.0435	1.52		Q	V			
16+15	5.0517	1.20		Q	V			
16+20	5.0592	1.08		Q	V			
16+25	5.0666	1.08		Q	V			
16+30	5.0740	1.08		Q	V			
16+35	5.0806	0.95		Q	V			
16+40	5.0863	0.84		Q	V			
16+45	5.0920	0.82		Q	V			
16+50	5.0975	0.81		Q	V			
16+55	5.1031	0.81		Q	V			
17+ 0	5.1087	0.81		Q	V			
17+ 5	5.1160	1.06		Q	V			
17+10	5.1249	1.29		Q	V			
17+15	5.1340	1.33		Q	V			
17+20	5.1433	1.35		Q	V			
17+25	5.1526	1.35		Q	V			
17+30	5.1619	1.35		Q	V			
17+35	5.1712	1.35		Q	V			
17+40	5.1804	1.35		Q	V			
17+45	5.1897	1.35		Q	V			
17+50	5.1981	1.22		Q	V			
17+55	5.2058	1.11		Q	V			
18+ 0	5.2132	1.09		Q	V			
18+ 5	5.2207	1.08		Q	V			

18+10	5.2281	1.08	| Q	|	|	| V	|
18+15	5.2355	1.08	| Q	|	|	| V	|
18+20	5.2429	1.08	| Q	|	|	| V	|
18+25	5.2504	1.08	| Q	|	|	| V	|
18+30	5.2578	1.08	| Q	|	|	| V	|
18+35	5.2643	0.95	| Q	|	|	| V	|
18+40	5.2701	0.84	| Q	|	|	| V	|
18+45	5.2757	0.82	| Q	|	|	| V	|
18+50	5.2804	0.68	| Q	|	|	| V	|
18+55	5.2843	0.57	| Q	|	|	| V	|
19+ 0	5.2881	0.55	| Q	|	|	| V	|
19+ 5	5.2927	0.67	| Q	|	|	| V	|
19+10	5.2981	0.78	| Q	|	|	| V	|
19+15	5.3036	0.80	| Q	|	|	| V	|
19+20	5.3100	0.94	| Q	|	|	| V	|
19+25	5.3173	1.05	| Q	|	|	| V	|
19+30	5.3246	1.07	| Q	|	|	| V	|
19+35	5.3312	0.95	| Q	|	|	| V	|
19+40	5.3369	0.84	| Q	|	|	| V	|
19+45	5.3426	0.82	| Q	|	|	| V	|
19+50	5.3473	0.68	| Q	|	|	| V	|
19+55	5.3512	0.57	| Q	|	|	| V	|
20+ 0	5.3549	0.55	| Q	|	|	| V	|
20+ 5	5.3595	0.67	| Q	|	|	| V	|
20+10	5.3649	0.78	| Q	|	|	| V	|
20+15	5.3704	0.80	| Q	|	|	| V	|
20+20	5.3760	0.81	| Q	|	|	| V	|
20+25	5.3816	0.81	| Q	|	|	| V	|
20+30	5.3871	0.81	| Q	|	|	| V	|
20+35	5.3927	0.81	| Q	|	|	| V	|
20+40	5.3983	0.81	| Q	|	|	| V	|
20+45	5.4038	0.81	| Q	|	|	| V	|
20+50	5.4085	0.68	| Q	|	|	| V	|
20+55	5.4124	0.57	| Q	|	|	| V	|
21+ 0	5.4162	0.55	| Q	|	|	| V	|
21+ 5	5.4208	0.67	| Q	|	|	| V	|
21+10	5.4262	0.78	| Q	|	|	| V	|
21+15	5.4317	0.80	| Q	|	|	| V	|
21+20	5.4364	0.68	| Q	|	|	| V	|
21+25	5.4403	0.57	| Q	|	|	| V	|
21+30	5.4440	0.55	| Q	|	|	| V	|
21+35	5.4486	0.67	| Q	|	|	| V	|
21+40	5.4540	0.78	| Q	|	|	| V	|
21+45	5.4595	0.80	| Q	|	|	| V	|
21+50	5.4642	0.68	| Q	|	|	| V	|
21+55	5.4681	0.57	| Q	|	|	| V	|
22+ 0	5.4719	0.55	| Q	|	|	| V	|
22+ 5	5.4765	0.67	| Q	|	|	| V	|
22+10	5.4819	0.78	| Q	|	|	| V	|
22+15	5.4874	0.80	| Q	|	|	| V	|
22+20	5.4921	0.68	| Q	|	|	| V	|
22+25	5.4960	0.57	| Q	|	|	| V	|
22+30	5.4997	0.55	| Q	|	|	| V	|
22+35	5.5035	0.54	| Q	|	|	| V	|
22+40	5.5072	0.54	| Q	|	|	| V	|
22+45	5.5109	0.54	| Q	|	|	| V	|
22+50	5.5146	0.54	| Q	|	|	| V	|
22+55	5.5183	0.54	| Q	|	|	| V	|
23+ 0	5.5220	0.54	| Q	|	|	| V	|
23+ 5	5.5257	0.54	| Q	|	|	| V	|
23+10	5.5294	0.54	| Q	|	|	| V	|
23+15	5.5332	0.54	| Q	|	|	| V	|
23+20	5.5369	0.54	| Q	|	|	| V	|

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  23+25       5.5406      0.54  | Q       |         |         |        V|
  23+30       5.5443      0.54  | Q       |         |         |        V|
  23+35       5.5480      0.54  | Q       |         |         |        V|
  23+40       5.5517      0.54  | Q       |         |         |        V|
  23+45       5.5554      0.54  | Q       |         |         |        V|
  23+50       5.5591      0.54  | Q       |         |         |        V|
  23+55       5.5629      0.54  | Q       |         |         |        V|
  24+ 0       5.5666      0.54  | Q       |         |         |        V|
  24+ 5       5.5685      0.28  |Q        |         |         |        V|
  24+10       5.5689      0.06  Q         |         |         |        V|
  24+15       5.5690      0.02  Q         |         |         |         V
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C.5 - Area "B"

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

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Study date 07/09/25 File: tcpb242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
BASIN B TRIBUTARY PROPOSED CONDITION
2-YEAR
24-HOUR

Drainage Area = 32.06(Ac.) = 0.050 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 32.06(Ac.) = 0.050 Sq. Mi.
Length along longest watercourse = 3154.00(Ft.)
Length along longest watercourse measured to centroid = 1600.00(Ft.)
Length along longest watercourse = 0.597 Mi.
Length along longest watercourse measured to centroid = 0.303 Mi.
Difference in elevation = 512.40(Ft.)
Slope along watercourse = 857.7907 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.052 Hr.
Lag time = 3.13 Min.
25% of lag time = 0.78 Min.
40% of lag time = 1.25 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
32.06	1.80	57.71

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
32.06	4.50	144.27

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
32.060	70.10	0.240

Total Area Entered = 32.06(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
70.1	51.1	0.561	0.240	0.439	1.000	0.439
					Sum (F) =	0.439

Area averaged mean soil loss (F) (In/Hr) = 0.439
Minimum soil loss rate ((In/Hr)) = 0.220
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.708

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	159.929	35.494	11.468
2	0.167	319.858	46.273	14.951
3	0.250	479.787	10.635	3.436
4	0.333	639.716	4.582	1.480
5	0.417	799.645	2.212	0.715
6	0.500	959.575	0.805	0.260
		Sum = 100.000	Sum=	32.310

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.779)	0.010	0.004
2	0.17	0.07	0.014	(0.776)	0.010	0.004
3	0.25	0.07	0.014	(0.773)	0.010	0.004
4	0.33	0.10	0.022	(0.770)	0.015	0.006
5	0.42	0.10	0.022	(0.767)	0.015	0.006
6	0.50	0.10	0.022	(0.764)	0.015	0.006
7	0.58	0.10	0.022	(0.761)	0.015	0.006
8	0.67	0.10	0.022	(0.758)	0.015	0.006
9	0.75	0.10	0.022	(0.755)	0.015	0.006
10	0.83	0.13	0.029	(0.752)	0.020	0.008
11	0.92	0.13	0.029	(0.749)	0.020	0.008
12	1.00	0.13	0.029	(0.746)	0.020	0.008
13	1.08	0.10	0.022	(0.743)	0.015	0.006
14	1.17	0.10	0.022	(0.740)	0.015	0.006
15	1.25	0.10	0.022	(0.737)	0.015	0.006
16	1.33	0.10	0.022	(0.735)	0.015	0.006
17	1.42	0.10	0.022	(0.732)	0.015	0.006
18	1.50	0.10	0.022	(0.729)	0.015	0.006
19	1.58	0.10	0.022	(0.726)	0.015	0.006
20	1.67	0.10	0.022	(0.723)	0.015	0.006

21	1.75	0.10	0.022	(0.720)	0.015	0.006
22	1.83	0.13	0.029	(0.717)	0.020	0.008
23	1.92	0.13	0.029	(0.714)	0.020	0.008
24	2.00	0.13	0.029	(0.711)	0.020	0.008
25	2.08	0.13	0.029	(0.708)	0.020	0.008
26	2.17	0.13	0.029	(0.706)	0.020	0.008
27	2.25	0.13	0.029	(0.703)	0.020	0.008
28	2.33	0.13	0.029	(0.700)	0.020	0.008
29	2.42	0.13	0.029	(0.697)	0.020	0.008
30	2.50	0.13	0.029	(0.694)	0.020	0.008
31	2.58	0.17	0.036	(0.691)	0.025	0.011
32	2.67	0.17	0.036	(0.688)	0.025	0.011
33	2.75	0.17	0.036	(0.686)	0.025	0.011
34	2.83	0.17	0.036	(0.683)	0.025	0.011
35	2.92	0.17	0.036	(0.680)	0.025	0.011
36	3.00	0.17	0.036	(0.677)	0.025	0.011
37	3.08	0.17	0.036	(0.674)	0.025	0.011
38	3.17	0.17	0.036	(0.672)	0.025	0.011
39	3.25	0.17	0.036	(0.669)	0.025	0.011
40	3.33	0.17	0.036	(0.666)	0.025	0.011
41	3.42	0.17	0.036	(0.663)	0.025	0.011
42	3.50	0.17	0.036	(0.660)	0.025	0.011
43	3.58	0.17	0.036	(0.658)	0.025	0.011
44	3.67	0.17	0.036	(0.655)	0.025	0.011
45	3.75	0.17	0.036	(0.652)	0.025	0.011
46	3.83	0.20	0.043	(0.649)	0.031	0.013
47	3.92	0.20	0.043	(0.647)	0.031	0.013
48	4.00	0.20	0.043	(0.644)	0.031	0.013
49	4.08	0.20	0.043	(0.641)	0.031	0.013
50	4.17	0.20	0.043	(0.638)	0.031	0.013
51	4.25	0.20	0.043	(0.636)	0.031	0.013
52	4.33	0.23	0.050	(0.633)	0.036	0.015
53	4.42	0.23	0.050	(0.630)	0.036	0.015
54	4.50	0.23	0.050	(0.628)	0.036	0.015
55	4.58	0.23	0.050	(0.625)	0.036	0.015
56	4.67	0.23	0.050	(0.622)	0.036	0.015
57	4.75	0.23	0.050	(0.620)	0.036	0.015
58	4.83	0.27	0.058	(0.617)	0.041	0.017
59	4.92	0.27	0.058	(0.614)	0.041	0.017
60	5.00	0.27	0.058	(0.612)	0.041	0.017
61	5.08	0.20	0.043	(0.609)	0.031	0.013
62	5.17	0.20	0.043	(0.606)	0.031	0.013
63	5.25	0.20	0.043	(0.604)	0.031	0.013
64	5.33	0.23	0.050	(0.601)	0.036	0.015
65	5.42	0.23	0.050	(0.598)	0.036	0.015
66	5.50	0.23	0.050	(0.596)	0.036	0.015
67	5.58	0.27	0.058	(0.593)	0.041	0.017
68	5.67	0.27	0.058	(0.590)	0.041	0.017
69	5.75	0.27	0.058	(0.588)	0.041	0.017
70	5.83	0.27	0.058	(0.585)	0.041	0.017
71	5.92	0.27	0.058	(0.583)	0.041	0.017
72	6.00	0.27	0.058	(0.580)	0.041	0.017
73	6.08	0.30	0.065	(0.578)	0.046	0.019
74	6.17	0.30	0.065	(0.575)	0.046	0.019
75	6.25	0.30	0.065	(0.572)	0.046	0.019
76	6.33	0.30	0.065	(0.570)	0.046	0.019
77	6.42	0.30	0.065	(0.567)	0.046	0.019
78	6.50	0.30	0.065	(0.565)	0.046	0.019
79	6.58	0.33	0.072	(0.562)	0.051	0.021
80	6.67	0.33	0.072	(0.560)	0.051	0.021
81	6.75	0.33	0.072	(0.557)	0.051	0.021
82	6.83	0.33	0.072	(0.555)	0.051	0.021
83	6.92	0.33	0.072	(0.552)	0.051	0.021

84	7.00	0.33	0.072	(0.550)	0.051	0.021
85	7.08	0.33	0.072	(0.547)	0.051	0.021
86	7.17	0.33	0.072	(0.545)	0.051	0.021
87	7.25	0.33	0.072	(0.542)	0.051	0.021
88	7.33	0.37	0.079	(0.540)	0.056	0.023
89	7.42	0.37	0.079	(0.537)	0.056	0.023
90	7.50	0.37	0.079	(0.535)	0.056	0.023
91	7.58	0.40	0.086	(0.532)	0.061	0.025
92	7.67	0.40	0.086	(0.530)	0.061	0.025
93	7.75	0.40	0.086	(0.527)	0.061	0.025
94	7.83	0.43	0.094	(0.525)	0.066	0.027
95	7.92	0.43	0.094	(0.523)	0.066	0.027
96	8.00	0.43	0.094	(0.520)	0.066	0.027
97	8.08	0.50	0.108	(0.518)	0.076	0.032
98	8.17	0.50	0.108	(0.515)	0.076	0.032
99	8.25	0.50	0.108	(0.513)	0.076	0.032
100	8.33	0.50	0.108	(0.511)	0.076	0.032
101	8.42	0.50	0.108	(0.508)	0.076	0.032
102	8.50	0.50	0.108	(0.506)	0.076	0.032
103	8.58	0.53	0.115	(0.503)	0.082	0.034
104	8.67	0.53	0.115	(0.501)	0.082	0.034
105	8.75	0.53	0.115	(0.499)	0.082	0.034
106	8.83	0.57	0.122	(0.496)	0.087	0.036
107	8.92	0.57	0.122	(0.494)	0.087	0.036
108	9.00	0.57	0.122	(0.492)	0.087	0.036
109	9.08	0.63	0.137	(0.489)	0.097	0.040
110	9.17	0.63	0.137	(0.487)	0.097	0.040
111	9.25	0.63	0.137	(0.485)	0.097	0.040
112	9.33	0.67	0.144	(0.482)	0.102	0.042
113	9.42	0.67	0.144	(0.480)	0.102	0.042
114	9.50	0.67	0.144	(0.478)	0.102	0.042
115	9.58	0.70	0.151	(0.475)	0.107	0.044
116	9.67	0.70	0.151	(0.473)	0.107	0.044
117	9.75	0.70	0.151	(0.471)	0.107	0.044
118	9.83	0.73	0.158	(0.469)	0.112	0.046
119	9.92	0.73	0.158	(0.466)	0.112	0.046
120	10.00	0.73	0.158	(0.464)	0.112	0.046
121	10.08	0.50	0.108	(0.462)	0.076	0.032
122	10.17	0.50	0.108	(0.460)	0.076	0.032
123	10.25	0.50	0.108	(0.457)	0.076	0.032
124	10.33	0.50	0.108	(0.455)	0.076	0.032
125	10.42	0.50	0.108	(0.453)	0.076	0.032
126	10.50	0.50	0.108	(0.451)	0.076	0.032
127	10.58	0.67	0.144	(0.449)	0.102	0.042
128	10.67	0.67	0.144	(0.446)	0.102	0.042
129	10.75	0.67	0.144	(0.444)	0.102	0.042
130	10.83	0.67	0.144	(0.442)	0.102	0.042
131	10.92	0.67	0.144	(0.440)	0.102	0.042
132	11.00	0.67	0.144	(0.438)	0.102	0.042
133	11.08	0.63	0.137	(0.436)	0.097	0.040
134	11.17	0.63	0.137	(0.433)	0.097	0.040
135	11.25	0.63	0.137	(0.431)	0.097	0.040
136	11.33	0.63	0.137	(0.429)	0.097	0.040
137	11.42	0.63	0.137	(0.427)	0.097	0.040
138	11.50	0.63	0.137	(0.425)	0.097	0.040
139	11.58	0.57	0.122	(0.423)	0.087	0.036
140	11.67	0.57	0.122	(0.421)	0.087	0.036
141	11.75	0.57	0.122	(0.419)	0.087	0.036
142	11.83	0.60	0.130	(0.416)	0.092	0.038
143	11.92	0.60	0.130	(0.414)	0.092	0.038
144	12.00	0.60	0.130	(0.412)	0.092	0.038
145	12.08	0.83	0.180	(0.410)	0.127	0.053
146	12.17	0.83	0.180	(0.408)	0.127	0.053

147	12.25	0.83	0.180	(0.406)	0.127	0.053
148	12.33	0.87	0.187	(0.404)	0.133	0.055
149	12.42	0.87	0.187	(0.402)	0.133	0.055
150	12.50	0.87	0.187	(0.400)	0.133	0.055
151	12.58	0.93	0.202	(0.398)	0.143	0.059
152	12.67	0.93	0.202	(0.396)	0.143	0.059
153	12.75	0.93	0.202	(0.394)	0.143	0.059
154	12.83	0.97	0.209	(0.392)	0.148	0.061
155	12.92	0.97	0.209	(0.390)	0.148	0.061
156	13.00	0.97	0.209	(0.388)	0.148	0.061
157	13.08	1.13	0.245	(0.386)	0.173	0.071
158	13.17	1.13	0.245	(0.384)	0.173	0.071
159	13.25	1.13	0.245	(0.382)	0.173	0.071
160	13.33	1.13	0.245	(0.380)	0.173	0.071
161	13.42	1.13	0.245	(0.378)	0.173	0.071
162	13.50	1.13	0.245	(0.376)	0.173	0.071
163	13.58	0.77	0.166	(0.375)	0.117	0.048
164	13.67	0.77	0.166	(0.373)	0.117	0.048
165	13.75	0.77	0.166	(0.371)	0.117	0.048
166	13.83	0.77	0.166	(0.369)	0.117	0.048
167	13.92	0.77	0.166	(0.367)	0.117	0.048
168	14.00	0.77	0.166	(0.365)	0.117	0.048
169	14.08	0.90	0.194	(0.363)	0.138	0.057
170	14.17	0.90	0.194	(0.361)	0.138	0.057
171	14.25	0.90	0.194	(0.359)	0.138	0.057
172	14.33	0.87	0.187	(0.358)	0.133	0.055
173	14.42	0.87	0.187	(0.356)	0.133	0.055
174	14.50	0.87	0.187	(0.354)	0.133	0.055
175	14.58	0.87	0.187	(0.352)	0.133	0.055
176	14.67	0.87	0.187	(0.350)	0.133	0.055
177	14.75	0.87	0.187	(0.349)	0.133	0.055
178	14.83	0.83	0.180	(0.347)	0.127	0.053
179	14.92	0.83	0.180	(0.345)	0.127	0.053
180	15.00	0.83	0.180	(0.343)	0.127	0.053
181	15.08	0.80	0.173	(0.341)	0.122	0.050
182	15.17	0.80	0.173	(0.340)	0.122	0.050
183	15.25	0.80	0.173	(0.338)	0.122	0.050
184	15.33	0.77	0.166	(0.336)	0.117	0.048
185	15.42	0.77	0.166	(0.335)	0.117	0.048
186	15.50	0.77	0.166	(0.333)	0.117	0.048
187	15.58	0.63	0.137	(0.331)	0.097	0.040
188	15.67	0.63	0.137	(0.329)	0.097	0.040
189	15.75	0.63	0.137	(0.328)	0.097	0.040
190	15.83	0.63	0.137	(0.326)	0.097	0.040
191	15.92	0.63	0.137	(0.324)	0.097	0.040
192	16.00	0.63	0.137	(0.323)	0.097	0.040
193	16.08	0.13	0.029	(0.321)	0.020	0.008
194	16.17	0.13	0.029	(0.319)	0.020	0.008
195	16.25	0.13	0.029	(0.318)	0.020	0.008
196	16.33	0.13	0.029	(0.316)	0.020	0.008
197	16.42	0.13	0.029	(0.315)	0.020	0.008
198	16.50	0.13	0.029	(0.313)	0.020	0.008
199	16.58	0.10	0.022	(0.311)	0.015	0.006
200	16.67	0.10	0.022	(0.310)	0.015	0.006
201	16.75	0.10	0.022	(0.308)	0.015	0.006
202	16.83	0.10	0.022	(0.307)	0.015	0.006
203	16.92	0.10	0.022	(0.305)	0.015	0.006
204	17.00	0.10	0.022	(0.304)	0.015	0.006
205	17.08	0.17	0.036	(0.302)	0.025	0.011
206	17.17	0.17	0.036	(0.301)	0.025	0.011
207	17.25	0.17	0.036	(0.299)	0.025	0.011
208	17.33	0.17	0.036	(0.298)	0.025	0.011
209	17.42	0.17	0.036	(0.296)	0.025	0.011

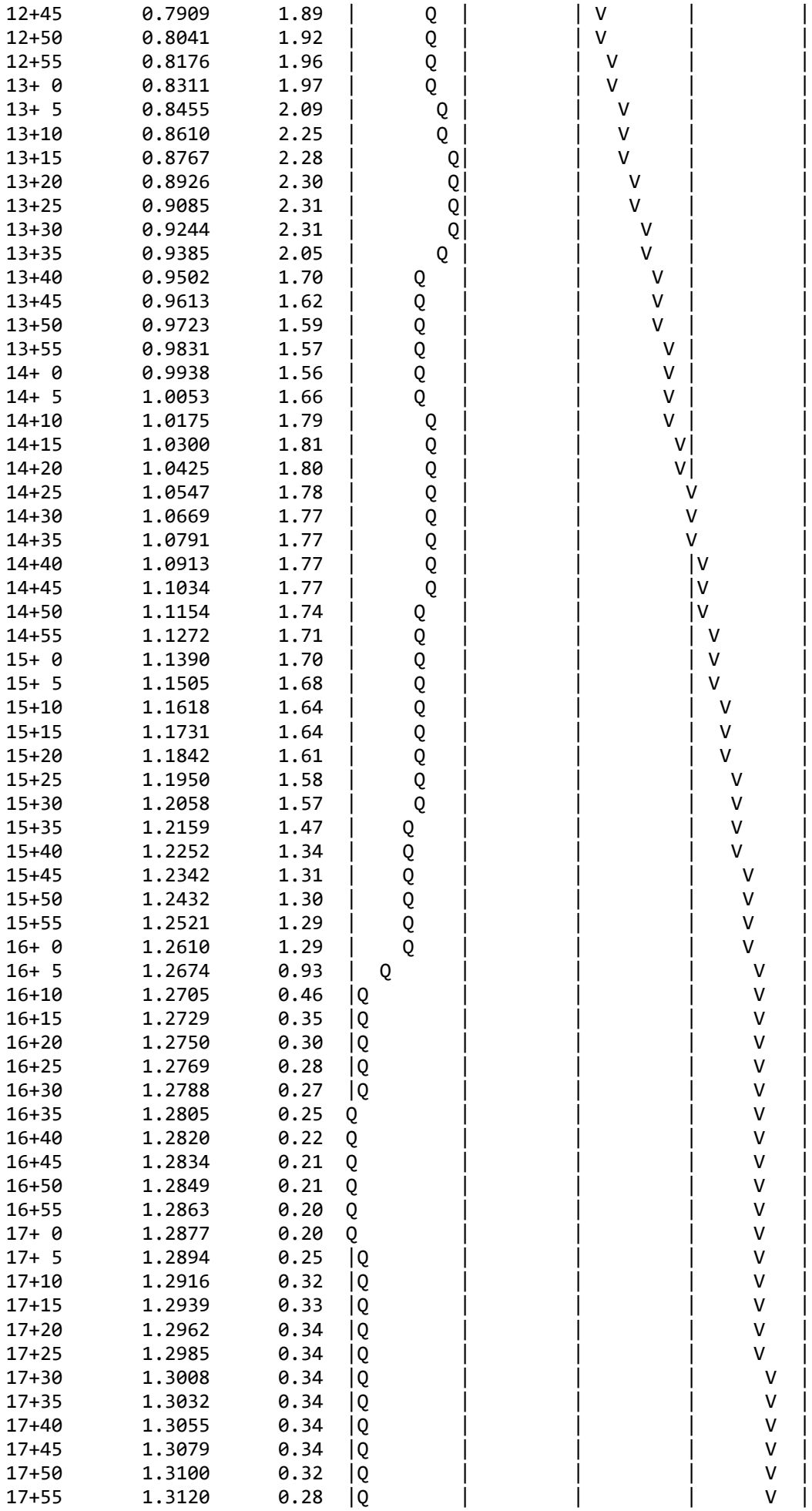
210	17.50	0.17	0.036	(0.295)	0.025	0.011
211	17.58	0.17	0.036	(0.293)	0.025	0.011
212	17.67	0.17	0.036	(0.292)	0.025	0.011
213	17.75	0.17	0.036	(0.290)	0.025	0.011
214	17.83	0.13	0.029	(0.289)	0.020	0.008
215	17.92	0.13	0.029	(0.287)	0.020	0.008
216	18.00	0.13	0.029	(0.286)	0.020	0.008
217	18.08	0.13	0.029	(0.284)	0.020	0.008
218	18.17	0.13	0.029	(0.283)	0.020	0.008
219	18.25	0.13	0.029	(0.282)	0.020	0.008
220	18.33	0.13	0.029	(0.280)	0.020	0.008
221	18.42	0.13	0.029	(0.279)	0.020	0.008
222	18.50	0.13	0.029	(0.278)	0.020	0.008
223	18.58	0.10	0.022	(0.276)	0.015	0.006
224	18.67	0.10	0.022	(0.275)	0.015	0.006
225	18.75	0.10	0.022	(0.274)	0.015	0.006
226	18.83	0.07	0.014	(0.272)	0.010	0.004
227	18.92	0.07	0.014	(0.271)	0.010	0.004
228	19.00	0.07	0.014	(0.270)	0.010	0.004
229	19.08	0.10	0.022	(0.268)	0.015	0.006
230	19.17	0.10	0.022	(0.267)	0.015	0.006
231	19.25	0.10	0.022	(0.266)	0.015	0.006
232	19.33	0.13	0.029	(0.265)	0.020	0.008
233	19.42	0.13	0.029	(0.263)	0.020	0.008
234	19.50	0.13	0.029	(0.262)	0.020	0.008
235	19.58	0.10	0.022	(0.261)	0.015	0.006
236	19.67	0.10	0.022	(0.260)	0.015	0.006
237	19.75	0.10	0.022	(0.259)	0.015	0.006
238	19.83	0.07	0.014	(0.257)	0.010	0.004
239	19.92	0.07	0.014	(0.256)	0.010	0.004
240	20.00	0.07	0.014	(0.255)	0.010	0.004
241	20.08	0.10	0.022	(0.254)	0.015	0.006
242	20.17	0.10	0.022	(0.253)	0.015	0.006
243	20.25	0.10	0.022	(0.252)	0.015	0.006
244	20.33	0.10	0.022	(0.251)	0.015	0.006
245	20.42	0.10	0.022	(0.250)	0.015	0.006
246	20.50	0.10	0.022	(0.249)	0.015	0.006
247	20.58	0.10	0.022	(0.248)	0.015	0.006
248	20.67	0.10	0.022	(0.247)	0.015	0.006
249	20.75	0.10	0.022	(0.246)	0.015	0.006
250	20.83	0.07	0.014	(0.245)	0.010	0.004
251	20.92	0.07	0.014	(0.244)	0.010	0.004
252	21.00	0.07	0.014	(0.243)	0.010	0.004
253	21.08	0.10	0.022	(0.242)	0.015	0.006
254	21.17	0.10	0.022	(0.241)	0.015	0.006
255	21.25	0.10	0.022	(0.240)	0.015	0.006
256	21.33	0.07	0.014	(0.239)	0.010	0.004
257	21.42	0.07	0.014	(0.238)	0.010	0.004
258	21.50	0.07	0.014	(0.237)	0.010	0.004
259	21.58	0.10	0.022	(0.236)	0.015	0.006
260	21.67	0.10	0.022	(0.235)	0.015	0.006
261	21.75	0.10	0.022	(0.234)	0.015	0.006
262	21.83	0.07	0.014	(0.234)	0.010	0.004
263	21.92	0.07	0.014	(0.233)	0.010	0.004
264	22.00	0.07	0.014	(0.232)	0.010	0.004
265	22.08	0.10	0.022	(0.231)	0.015	0.006
266	22.17	0.10	0.022	(0.231)	0.015	0.006
267	22.25	0.10	0.022	(0.230)	0.015	0.006
268	22.33	0.07	0.014	(0.229)	0.010	0.004
269	22.42	0.07	0.014	(0.228)	0.010	0.004
270	22.50	0.07	0.014	(0.228)	0.010	0.004
271	22.58	0.07	0.014	(0.227)	0.010	0.004
272	22.67	0.07	0.014	(0.226)	0.010	0.004

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273  22.75     0.07      0.014       (  0.226)       0.010        0.004
274  22.83     0.07      0.014       (  0.225)       0.010        0.004
275  22.92     0.07      0.014       (  0.225)       0.010        0.004
276  23.00     0.07      0.014       (  0.224)       0.010        0.004
277  23.08     0.07      0.014       (  0.224)       0.010        0.004
278  23.17     0.07      0.014       (  0.223)       0.010        0.004
279  23.25     0.07      0.014       (  0.223)       0.010        0.004
280  23.33     0.07      0.014       (  0.222)       0.010        0.004
281  23.42     0.07      0.014       (  0.222)       0.010        0.004
282  23.50     0.07      0.014       (  0.221)       0.010        0.004
283  23.58     0.07      0.014       (  0.221)       0.010        0.004
284  23.67     0.07      0.014       (  0.221)       0.010        0.004
285  23.75     0.07      0.014       (  0.220)       0.010        0.004
286  23.83     0.07      0.014       (  0.220)       0.010        0.004
287  23.92     0.07      0.014       (  0.220)       0.010        0.004
288  24.00     0.07      0.014       (  0.220)       0.010        0.004
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     6.3
       Flood volume = Effective rainfall      0.53(In)
        times area      32.1(Ac.)/[(In)/(Ft.)] =       1.4(Ac.Ft)
       Total soil loss =      1.27(In)
       Total soil loss =     3.405(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =       61164.3 Cubic Feet
       Total soil loss =      148302.6 Cubic Feet
       ------------------------------------------------------------------
        Peak flow rate of this hydrograph =      2.311(CFS)
       ------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0003      0.05  Q         |         |         |         |
   0+10       0.0011      0.11  Q         |         |         |         |
   0+15       0.0020      0.13  Q         |         |         |         |
   0+20       0.0030      0.16  Q         |         |         |         |
   0+25       0.0043      0.19  Q         |         |         |         |
   0+30       0.0057      0.20  Q         |         |         |         |
   0+35       0.0071      0.20  Q         |         |         |         |
   0+40       0.0085      0.20  Q         |         |         |         |
   0+45       0.0099      0.20  Q         |         |         |         |
   0+50       0.0115      0.23  Q         |         |         |         |
   0+55       0.0133      0.26  VQ        |         |         |         |
   1+ 0       0.0151      0.27  VQ        |         |         |         |
   1+ 5       0.0168      0.25  Q         |         |         |         |
   1+10       0.0183      0.22  Q         |         |         |         |
   1+15       0.0197      0.21  Q         |         |         |         |
   1+20       0.0211      0.21  Q         |         |         |         |
   1+25       0.0225      0.20  Q         |         |         |         |
   1+30       0.0240      0.20  Q         |         |         |         |
   1+35       0.0254      0.20  Q         |         |         |         |
   1+40       0.0268      0.20  Q         |         |         |         |
   1+45       0.0282      0.20  Q         |         |         |         |
   1+50       0.0297      0.23  Q         |         |         |         |
   1+55       0.0315      0.26  VQ        |         |         |         |
   2+ 0       0.0334      0.27  VQ        |         |         |         |
   2+ 5       0.0352      0.27  |Q        |         |         |         |
   2+10       0.0371      0.27  |Q        |         |         |         |
```

2+15	0.0390	0.27	Q				
2+20	0.0408	0.27	Q				
2+25	0.0427	0.27	Q				
2+30	0.0446	0.27	Q				
2+35	0.0466	0.30	Q				
2+40	0.0489	0.33	Q				
2+45	0.0512	0.33	Q				
2+50	0.0535	0.34	Q				
2+55	0.0558	0.34	Q				
3+ 0	0.0582	0.34	Q				
3+ 5	0.0605	0.34	Q				
3+10	0.0629	0.34	Q				
3+15	0.0652	0.34	Q				
3+20	0.0675	0.34	Q				
3+25	0.0699	0.34	Q				
3+30	0.0722	0.34	QV				
3+35	0.0746	0.34	QV				
3+40	0.0769	0.34	QV				
3+45	0.0792	0.34	QV				
3+50	0.0817	0.36	QV				
3+55	0.0845	0.40	QV				
4+ 0	0.0872	0.40	QV				
4+ 5	0.0900	0.41	QV				
4+10	0.0928	0.41	QV				
4+15	0.0956	0.41	QV				
4+20	0.0986	0.43	QV				
4+25	0.1018	0.46	QV				
4+30	0.1051	0.47	QV				
4+35	0.1083	0.47	Q V				
4+40	0.1116	0.48	Q V				
4+45	0.1149	0.48	Q V				
4+50	0.1183	0.50	Q V				
4+55	0.1220	0.53	QV				
5+ 0	0.1257	0.54	QV				
5+ 5	0.1291	0.49	Q V				
5+10	0.1320	0.43	Q V				
5+15	0.1349	0.42	Q V				
5+20	0.1379	0.44	Q V				
5+25	0.1411	0.46	Q V				
5+30	0.1444	0.47	Q V				
5+35	0.1478	0.50	Q V				
5+40	0.1515	0.53	Q V				
5+45	0.1552	0.54	Q V				
5+50	0.1589	0.54	Q V				
5+55	0.1626	0.54	Q V				
6+ 0	0.1664	0.54	Q V				
6+ 5	0.1703	0.57	Q V				
6+10	0.1744	0.60	Q V				
6+15	0.1786	0.61	Q V				
6+20	0.1828	0.61	Q V				
6+25	0.1870	0.61	Q V				
6+30	0.1912	0.61	Q V				
6+35	0.1956	0.64	Q V				
6+40	0.2002	0.67	Q V				
6+45	0.2048	0.67	Q V				
6+50	0.2095	0.68	Q V				
6+55	0.2142	0.68	Q V				
7+ 0	0.2189	0.68	Q V				
7+ 5	0.2235	0.68	Q V				
7+10	0.2282	0.68	Q V				
7+15	0.2329	0.68	Q V				
7+20	0.2377	0.70	Q V				
7+25	0.2428	0.74	Q V				

```
 7+30       0.2479      0.74  | Q    V  |          |          |          |
 7+35       0.2532      0.77  |  Q   V  |          |          |          |
 7+40       0.2587      0.80  |  Q   V  |          |          |          |
 7+45       0.2643      0.81  |  Q   V  |          |          |          |
 7+50       0.2701      0.84  |  Q   V  |          |          |          |
 7+55       0.2761      0.87  |  Q   V  |          |          |          |
 8+ 0       0.2821      0.88  |  Q    V |          |          |          |
 8+ 5       0.2885      0.93  |  Q    V |          |          |          |
 8+10       0.2954      0.99  |  Q    V |          |          |          |
 8+15       0.3023      1.01  |   Q   V |          |          |          |
 8+20       0.3093      1.02  |   Q   V |          |          |          |
 8+25       0.3163      1.02  |   Q    V|          |          |          |
 8+30       0.3234      1.02  |   Q    V|          |          |          |
 8+35       0.3305      1.04  |   Q    V|          |          |          |
 8+40       0.3380      1.07  |   Q    V|          |          |          |
 8+45       0.3454      1.08  |   Q    V|          |          |          |
 8+50       0.3530      1.11  |   Q     V          |          |          |
 8+55       0.3609      1.14  |   Q     V          |          |          |
 9+ 0       0.3688      1.15  |   Q     V          |          |          |
 9+ 5       0.3771      1.20  |   Q     V          |          |          |
 9+10       0.3858      1.27  |    Q    V          |          |          |
 9+15       0.3947      1.28  |    Q    |V         |          |          |
 9+20       0.4037      1.31  |    Q    |V         |          |          |
 9+25       0.4129      1.35  |    Q    |V         |          |          |
 9+30       0.4223      1.35  |    Q    | V        |          |          |
 9+35       0.4318      1.38  |    Q    | V        |          |          |
 9+40       0.4415      1.41  |    Q    | V        |          |          |
 9+45       0.4513      1.42  |    Q    | V        |          |          |
 9+50       0.4613      1.45  |    Q    |  V       |          |          |
 9+55       0.4715      1.48  |    Q    |  V       |          |          |
10+ 0       0.4818      1.49  |    Q    |  V       |          |          |
10+ 5       0.4909      1.32  |    Q    |  V       |          |          |
10+10       0.4985      1.11  |   Q     |   V      |          |          |
10+15       0.5058      1.06  |   Q     |   V      |          |          |
10+20       0.5129      1.03  |   Q     |   V      |          |          |
10+25       0.5199      1.02  |   Q     |   V      |          |          |
10+30       0.5270      1.02  |   Q     |    V     |          |          |
10+35       0.5348      1.14  |   Q     |    V     |          |          |
10+40       0.5437      1.30  |    Q    |    V     |          |          |
10+45       0.5529      1.33  |    Q    |    V     |          |          |
10+50       0.5622      1.35  |    Q    |     V    |          |          |
10+55       0.5716      1.36  |    Q    |     V    |          |          |
11+ 0       0.5809      1.36  |    Q    |     V    |          |          |
11+ 5       0.5901      1.34  |    Q    |     V    |          |          |
11+10       0.5991      1.30  |    Q    |      V   |          |          |
11+15       0.6080      1.30  |    Q    |      V   |          |          |
11+20       0.6169      1.29  |    Q    |      V   |          |          |
11+25       0.6258      1.29  |    Q    |      V   |          |          |
11+30       0.6347      1.29  |    Q    |       V  |          |          |
11+35       0.6433      1.24  |   Q     |       V  |          |          |
11+40       0.6514      1.18  |   Q     |       V  |          |          |
11+45       0.6594      1.17  |   Q     |       V  |          |          |
11+50       0.6676      1.18  |   Q     |        V |          |          |
11+55       0.6759      1.21  |   Q     |        V |          |          |
12+ 0       0.6843      1.22  |   Q     |        V |          |          |
12+ 5       0.6939      1.39  |    Q    |        V |          |          |
12+10       0.7050      1.61  |     Q   |         V          |          |
12+15       0.7165      1.66  |     Q   |         V          |          |
12+20       0.7282      1.71  |     Q   |         V          |          |
12+25       0.7403      1.75  |      Q  |         |V         |          |
12+30       0.7524      1.76  |      Q  |         |V         |          |
12+35       0.7649      1.81  |      Q  |         |V         |          |
12+40       0.7778      1.88  |      Q  |         | V        |          |
```



12+45	0.7909	1.89	Q		V	
12+50	0.8041	1.92	Q		V	
12+55	0.8176	1.96	Q		V	
13+ 0	0.8311	1.97	Q		V	
13+ 5	0.8455	2.09	Q		V	
13+10	0.8610	2.25	Q		V	
13+15	0.8767	2.28	Q		V	
13+20	0.8926	2.30	Q		V	
13+25	0.9085	2.31	Q		V	
13+30	0.9244	2.31	Q		V	
13+35	0.9385	2.05	Q		V	
13+40	0.9502	1.70	Q		V	
13+45	0.9613	1.62	Q		V	
13+50	0.9723	1.59	Q		V	
13+55	0.9831	1.57	Q		V	
14+ 0	0.9938	1.56	Q		V	
14+ 5	1.0053	1.66	Q		V	
14+10	1.0175	1.79	Q		V	
14+15	1.0300	1.81	Q		V	
14+20	1.0425	1.80	Q		V	
14+25	1.0547	1.78	Q		V	
14+30	1.0669	1.77	Q		V	
14+35	1.0791	1.77	Q		V	
14+40	1.0913	1.77	Q		V	
14+45	1.1034	1.77	Q		V	
14+50	1.1154	1.74	Q		V	
14+55	1.1272	1.71	Q		V	
15+ 0	1.1390	1.70	Q		V	
15+ 5	1.1505	1.68	Q		V	
15+10	1.1618	1.64	Q		V	
15+15	1.1731	1.64	Q		V	
15+20	1.1842	1.61	Q		V	
15+25	1.1950	1.58	Q		V	
15+30	1.2058	1.57	Q		V	
15+35	1.2159	1.47	Q		V	
15+40	1.2252	1.34	Q		V	
15+45	1.2342	1.31	Q		V	
15+50	1.2432	1.30	Q		V	
15+55	1.2521	1.29	Q		V	
16+ 0	1.2610	1.29	Q		V	
16+ 5	1.2674	0.93	Q		V	
16+10	1.2705	0.46	Q		V	
16+15	1.2729	0.35	Q		V	
16+20	1.2750	0.30	Q		V	
16+25	1.2769	0.28	Q		V	
16+30	1.2788	0.27	Q		V	
16+35	1.2805	0.25	Q		V	
16+40	1.2820	0.22	Q		V	
16+45	1.2834	0.21	Q		V	
16+50	1.2849	0.21	Q		V	
16+55	1.2863	0.20	Q		V	
17+ 0	1.2877	0.20	Q		V	
17+ 5	1.2894	0.25	Q		V	
17+10	1.2916	0.32	Q		V	
17+15	1.2939	0.33	Q		V	
17+20	1.2962	0.34	Q		V	
17+25	1.2985	0.34	Q		V	
17+30	1.3008	0.34	Q		V	
17+35	1.3032	0.34	Q		V	
17+40	1.3055	0.34	Q		V	
17+45	1.3079	0.34	Q		V	
17+50	1.3100	0.32	Q		V	
17+55	1.3120	0.28	Q		V	

```
18+ 0       1.3139      0.28  |Q        |         |         |      V  |
18+ 5       1.3158      0.27  |Q        |         |         |      V  |
18+10       1.3177      0.27  |Q        |         |         |      V  |
18+15       1.3195      0.27  |Q        |         |         |      V  |
18+20       1.3214      0.27  |Q        |         |         |      V  |
18+25       1.3233      0.27  |Q        |         |         |      V  |
18+30       1.3251      0.27  |Q        |         |         |      V  |
18+35       1.3269      0.25  Q         |         |         |      V  |
18+40       1.3283      0.22  Q         |         |         |      V  |
18+45       1.3298      0.21  Q         |         |         |      V  |
18+50       1.3310      0.18  Q         |         |         |      V  |
18+55       1.3321      0.15  Q         |         |         |      V  |
19+ 0       1.3330      0.14  Q         |         |         |      V  |
19+ 5       1.3342      0.16  Q         |         |         |       V |
19+10       1.3355      0.19  Q         |         |         |       V |
19+15       1.3368      0.20  Q         |         |         |       V |
19+20       1.3384      0.23  Q         |         |         |       V |
19+25       1.3402      0.26  |Q        |         |         |       V |
19+30       1.3420      0.27  |Q        |         |         |       V |
19+35       1.3437      0.25  Q         |         |         |       V |
19+40       1.3452      0.22  Q         |         |         |       V |
19+45       1.3466      0.21  Q         |         |         |       V |
19+50       1.3479      0.18  Q         |         |         |       V |
19+55       1.3489      0.15  Q         |         |         |       V |
20+ 0       1.3499      0.14  Q         |         |         |       V |
20+ 5       1.3510      0.16  Q         |         |         |       V |
20+10       1.3523      0.19  Q         |         |         |       V |
20+15       1.3537      0.20  Q         |         |         |       V |
20+20       1.3551      0.20  Q         |         |         |       V |
20+25       1.3565      0.20  Q         |         |         |       V |
20+30       1.3579      0.20  Q         |         |         |       V |
20+35       1.3593      0.20  Q         |         |         |       V |
20+40       1.3607      0.20  Q         |         |         |       V |
20+45       1.3621      0.20  Q         |         |         |       V |
20+50       1.3633      0.18  Q         |         |         |       V |
20+55       1.3644      0.15  Q         |         |         |       V |
21+ 0       1.3653      0.14  Q         |         |         |       V |
21+ 5       1.3664      0.16  Q         |         |         |       V |
21+10       1.3678      0.19  Q         |         |         |       V |
21+15       1.3691      0.20  Q         |         |         |        V|
21+20       1.3704      0.18  Q         |         |         |        V|
21+25       1.3714      0.15  Q         |         |         |        V|
21+30       1.3723      0.14  Q         |         |         |        V|
21+35       1.3735      0.16  Q         |         |         |        V|
21+40       1.3748      0.19  Q         |         |         |        V|
21+45       1.3762      0.20  Q         |         |         |        V|
21+50       1.3774      0.18  Q         |         |         |        V|
21+55       1.3784      0.15  Q         |         |         |        V|
22+ 0       1.3794      0.14  Q         |         |         |        V|
22+ 5       1.3805      0.16  Q         |         |         |        V|
22+10       1.3818      0.19  Q         |         |         |        V|
22+15       1.3832      0.20  Q         |         |         |        V|
22+20       1.3844      0.18  Q         |         |         |        V|
22+25       1.3854      0.15  Q         |         |         |        V|
22+30       1.3864      0.14  Q         |         |         |        V|
22+35       1.3873      0.14  Q         |         |         |        V|
22+40       1.3883      0.14  Q         |         |         |        V|
22+45       1.3892      0.14  Q         |         |         |        V|
22+50       1.3902      0.14  Q         |         |         |        V|
22+55       1.3911      0.14  Q         |         |         |        V|
23+ 0       1.3920      0.14  Q         |         |         |        V|
23+ 5       1.3930      0.14  Q         |         |         |        V|
23+10       1.3939      0.14  Q         |         |         |        V|
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  23+15       1.3948      0.14  Q         |         |         |         V|
  23+20       1.3958      0.14  Q         |         |         |         V|
  23+25       1.3967      0.14  Q         |         |         |         V|
  23+30       1.3976      0.14  Q         |         |         |         V|
  23+35       1.3986      0.14  Q         |         |         |         V|
  23+40       1.3995      0.14  Q         |         |         |         V|
  23+45       1.4005      0.14  Q         |         |         |         V|
  23+50       1.4014      0.14  Q         |         |         |         V|
  23+55       1.4023      0.14  Q         |         |         |         V|
  24+ 0       1.4033      0.14  Q         |         |         |         V|
  24+ 5       1.4039      0.09  Q         |         |         |         V|
  24+10       1.4040      0.02  Q         |         |         |         V|
  24+15       1.4041      0.01  Q         |         |         |         V|
  24+20       1.4041      0.00  Q         |         |         |         V|
  24+25       1.4041      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

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Study date 07/10/25 File: tcpb2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
BASIN B TRIBUTARY PROPOSED CONDITION
10-YEAR
24-HOUR

Drainage Area = 32.06(Ac.) = 0.050 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 32.06(Ac.) = 0.050 Sq. Mi.
Length along longest watercourse = 3154.00(Ft.)
Length along longest watercourse measured to centroid = 1600.00(Ft.)
Length along longest watercourse = 0.597 Mi.
Length along longest watercourse measured to centroid = 0.303 Mi.
Difference in elevation = 512.40(Ft.)
Slope along watercourse = 857.7907 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.052 Hr.
Lag time = 3.13 Min.
25% of lag time = 0.78 Min.
40% of lag time = 1.25 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
32.06	1.80	57.71

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
32.06	4.50	144.27

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
32.060	70.10	0.240

Total Area Entered = 32.06(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
70.1	70.1	0.361	0.240	0.283	1.000	0.283
					Sum (F) =	0.283

Area averaged mean soil loss (F) (In/Hr) = 0.283
Minimum soil loss rate ((In/Hr)) = 0.141
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.708

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	159.929	35.494	11.468
2	0.167	319.858	46.273	14.951
3	0.250	479.787	10.635	3.436
4	0.333	639.716	4.582	1.480
5	0.417	799.645	2.212	0.715
6	0.500	959.575	0.805	0.260
		Sum =	100.000 Sum=	32.310

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.501)		0.016	0.007
2	0.17	0.07	0.023	(0.500)		0.016	0.007
3	0.25	0.07	0.023	(0.498)		0.016	0.007
4	0.33	0.10	0.035	(0.496)		0.025	0.010
5	0.42	0.10	0.035	(0.494)		0.025	0.010
6	0.50	0.10	0.035	(0.492)		0.025	0.010
7	0.58	0.10	0.035	(0.490)		0.025	0.010
8	0.67	0.10	0.035	(0.488)		0.025	0.010
9	0.75	0.10	0.035	(0.486)		0.025	0.010
10	0.83	0.13	0.047	(0.484)		0.033	0.014
11	0.92	0.13	0.047	(0.482)		0.033	0.014
12	1.00	0.13	0.047	(0.480)		0.033	0.014
13	1.08	0.10	0.035	(0.478)		0.025	0.010
14	1.17	0.10	0.035	(0.477)		0.025	0.010
15	1.25	0.10	0.035	(0.475)		0.025	0.010
16	1.33	0.10	0.035	(0.473)		0.025	0.010
17	1.42	0.10	0.035	(0.471)		0.025	0.010
18	1.50	0.10	0.035	(0.469)		0.025	0.010
19	1.58	0.10	0.035	(0.467)		0.025	0.010
20	1.67	0.10	0.035	(0.465)		0.025	0.010

21	1.75	0.10	0.035	(0.463)	0.025	0.010
22	1.83	0.13	0.047	(0.462)	0.033	0.014
23	1.92	0.13	0.047	(0.460)	0.033	0.014
24	2.00	0.13	0.047	(0.458)	0.033	0.014
25	2.08	0.13	0.047	(0.456)	0.033	0.014
26	2.17	0.13	0.047	(0.454)	0.033	0.014
27	2.25	0.13	0.047	(0.452)	0.033	0.014
28	2.33	0.13	0.047	(0.450)	0.033	0.014
29	2.42	0.13	0.047	(0.449)	0.033	0.014
30	2.50	0.13	0.047	(0.447)	0.033	0.014
31	2.58	0.17	0.058	(0.445)	0.041	0.017
32	2.67	0.17	0.058	(0.443)	0.041	0.017
33	2.75	0.17	0.058	(0.441)	0.041	0.017
34	2.83	0.17	0.058	(0.439)	0.041	0.017
35	2.92	0.17	0.058	(0.438)	0.041	0.017
36	3.00	0.17	0.058	(0.436)	0.041	0.017
37	3.08	0.17	0.058	(0.434)	0.041	0.017
38	3.17	0.17	0.058	(0.432)	0.041	0.017
39	3.25	0.17	0.058	(0.430)	0.041	0.017
40	3.33	0.17	0.058	(0.429)	0.041	0.017
41	3.42	0.17	0.058	(0.427)	0.041	0.017
42	3.50	0.17	0.058	(0.425)	0.041	0.017
43	3.58	0.17	0.058	(0.423)	0.041	0.017
44	3.67	0.17	0.058	(0.422)	0.041	0.017
45	3.75	0.17	0.058	(0.420)	0.041	0.017
46	3.83	0.20	0.070	(0.418)	0.049	0.020
47	3.92	0.20	0.070	(0.416)	0.049	0.020
48	4.00	0.20	0.070	(0.414)	0.049	0.020
49	4.08	0.20	0.070	(0.413)	0.049	0.020
50	4.17	0.20	0.070	(0.411)	0.049	0.020
51	4.25	0.20	0.070	(0.409)	0.049	0.020
52	4.33	0.23	0.081	(0.407)	0.058	0.024
53	4.42	0.23	0.081	(0.406)	0.058	0.024
54	4.50	0.23	0.081	(0.404)	0.058	0.024
55	4.58	0.23	0.081	(0.402)	0.058	0.024
56	4.67	0.23	0.081	(0.401)	0.058	0.024
57	4.75	0.23	0.081	(0.399)	0.058	0.024
58	4.83	0.27	0.093	(0.397)	0.066	0.027
59	4.92	0.27	0.093	(0.395)	0.066	0.027
60	5.00	0.27	0.093	(0.394)	0.066	0.027
61	5.08	0.20	0.070	(0.392)	0.049	0.020
62	5.17	0.20	0.070	(0.390)	0.049	0.020
63	5.25	0.20	0.070	(0.389)	0.049	0.020
64	5.33	0.23	0.081	(0.387)	0.058	0.024
65	5.42	0.23	0.081	(0.385)	0.058	0.024
66	5.50	0.23	0.081	(0.383)	0.058	0.024
67	5.58	0.27	0.093	(0.382)	0.066	0.027
68	5.67	0.27	0.093	(0.380)	0.066	0.027
69	5.75	0.27	0.093	(0.378)	0.066	0.027
70	5.83	0.27	0.093	(0.377)	0.066	0.027
71	5.92	0.27	0.093	(0.375)	0.066	0.027
72	6.00	0.27	0.093	(0.373)	0.066	0.027
73	6.08	0.30	0.105	(0.372)	0.074	0.031
74	6.17	0.30	0.105	(0.370)	0.074	0.031
75	6.25	0.30	0.105	(0.368)	0.074	0.031
76	6.33	0.30	0.105	(0.367)	0.074	0.031
77	6.42	0.30	0.105	(0.365)	0.074	0.031
78	6.50	0.30	0.105	(0.364)	0.074	0.031
79	6.58	0.33	0.116	(0.362)	0.082	0.034
80	6.67	0.33	0.116	(0.360)	0.082	0.034
81	6.75	0.33	0.116	(0.359)	0.082	0.034
82	6.83	0.33	0.116	(0.357)	0.082	0.034
83	6.92	0.33	0.116	(0.355)	0.082	0.034

84	7.00	0.33	0.116	(0.354)	0.082	0.034
85	7.08	0.33	0.116	(0.352)	0.082	0.034
86	7.17	0.33	0.116	(0.351)	0.082	0.034
87	7.25	0.33	0.116	(0.349)	0.082	0.034
88	7.33	0.37	0.128	(0.347)	0.091	0.037
89	7.42	0.37	0.128	(0.346)	0.091	0.037
90	7.50	0.37	0.128	(0.344)	0.091	0.037
91	7.58	0.40	0.140	(0.343)	0.099	0.041
92	7.67	0.40	0.140	(0.341)	0.099	0.041
93	7.75	0.40	0.140	(0.339)	0.099	0.041
94	7.83	0.43	0.151	(0.338)	0.107	0.044
95	7.92	0.43	0.151	(0.336)	0.107	0.044
96	8.00	0.43	0.151	(0.335)	0.107	0.044
97	8.08	0.50	0.175	(0.333)	0.124	0.051
98	8.17	0.50	0.175	(0.332)	0.124	0.051
99	8.25	0.50	0.175	(0.330)	0.124	0.051
100	8.33	0.50	0.175	(0.329)	0.124	0.051
101	8.42	0.50	0.175	(0.327)	0.124	0.051
102	8.50	0.50	0.175	(0.326)	0.124	0.051
103	8.58	0.53	0.186	(0.324)	0.132	0.054
104	8.67	0.53	0.186	(0.322)	0.132	0.054
105	8.75	0.53	0.186	(0.321)	0.132	0.054
106	8.83	0.57	0.198	(0.319)	0.140	0.058
107	8.92	0.57	0.198	(0.318)	0.140	0.058
108	9.00	0.57	0.198	(0.316)	0.140	0.058
109	9.08	0.63	0.221	(0.315)	0.157	0.065
110	9.17	0.63	0.221	(0.313)	0.157	0.065
111	9.25	0.63	0.221	(0.312)	0.157	0.065
112	9.33	0.67	0.233	(0.310)	0.165	0.068
113	9.42	0.67	0.233	(0.309)	0.165	0.068
114	9.50	0.67	0.233	(0.307)	0.165	0.068
115	9.58	0.70	0.244	(0.306)	0.173	0.071
116	9.67	0.70	0.244	(0.305)	0.173	0.071
117	9.75	0.70	0.244	(0.303)	0.173	0.071
118	9.83	0.73	0.256	(0.302)	0.181	0.075
119	9.92	0.73	0.256	(0.300)	0.181	0.075
120	10.00	0.73	0.256	(0.299)	0.181	0.075
121	10.08	0.50	0.175	(0.297)	0.124	0.051
122	10.17	0.50	0.175	(0.296)	0.124	0.051
123	10.25	0.50	0.175	(0.294)	0.124	0.051
124	10.33	0.50	0.175	(0.293)	0.124	0.051
125	10.42	0.50	0.175	(0.292)	0.124	0.051
126	10.50	0.50	0.175	(0.290)	0.124	0.051
127	10.58	0.67	0.233	(0.289)	0.165	0.068
128	10.67	0.67	0.233	(0.287)	0.165	0.068
129	10.75	0.67	0.233	(0.286)	0.165	0.068
130	10.83	0.67	0.233	(0.284)	0.165	0.068
131	10.92	0.67	0.233	(0.283)	0.165	0.068
132	11.00	0.67	0.233	(0.282)	0.165	0.068
133	11.08	0.63	0.221	(0.280)	0.157	0.065
134	11.17	0.63	0.221	(0.279)	0.157	0.065
135	11.25	0.63	0.221	(0.278)	0.157	0.065
136	11.33	0.63	0.221	(0.276)	0.157	0.065
137	11.42	0.63	0.221	(0.275)	0.157	0.065
138	11.50	0.63	0.221	(0.273)	0.157	0.065
139	11.58	0.57	0.198	(0.272)	0.140	0.058
140	11.67	0.57	0.198	(0.271)	0.140	0.058
141	11.75	0.57	0.198	(0.269)	0.140	0.058
142	11.83	0.60	0.210	(0.268)	0.148	0.061
143	11.92	0.60	0.210	(0.267)	0.148	0.061
144	12.00	0.60	0.210	(0.265)	0.148	0.061
145	12.08	0.83	0.291	(0.264)	0.206	0.085
146	12.17	0.83	0.291	(0.263)	0.206	0.085

147	12.25	0.83	0.291	(	0.261)	0.206	0.085
148	12.33	0.87	0.303	(	0.260)	0.214	0.088
149	12.42	0.87	0.303	(	0.259)	0.214	0.088
150	12.50	0.87	0.303	(	0.258)	0.214	0.088
151	12.58	0.93	0.326	(	0.256)	0.231	0.095
152	12.67	0.93	0.326	(	0.255)	0.231	0.095
153	12.75	0.93	0.326	(	0.254)	0.231	0.095
154	12.83	0.97	0.338	(	0.252)	0.239	0.099
155	12.92	0.97	0.338	(	0.251)	0.239	0.099
156	13.00	0.97	0.338	(	0.250)	0.239	0.099
157	13.08	1.13	0.396		0.249	(0.280)	0.147
158	13.17	1.13	0.396		0.247	(0.280)	0.149
159	13.25	1.13	0.396		0.246	(0.280)	0.150
160	13.33	1.13	0.396		0.245	(0.280)	0.151
161	13.42	1.13	0.396		0.244	(0.280)	0.152
162	13.50	1.13	0.396		0.242	(0.280)	0.154
163	13.58	0.77	0.268	(	0.241)	0.190	0.078
164	13.67	0.77	0.268	(	0.240)	0.190	0.078
165	13.75	0.77	0.268	(	0.239)	0.190	0.078
166	13.83	0.77	0.268	(	0.237)	0.190	0.078
167	13.92	0.77	0.268	(	0.236)	0.190	0.078
168	14.00	0.77	0.268	(	0.235)	0.190	0.078
169	14.08	0.90	0.314	(	0.234)	0.223	0.092
170	14.17	0.90	0.314	(	0.233)	0.223	0.092
171	14.25	0.90	0.314	(	0.231)	0.223	0.092
172	14.33	0.87	0.303	(	0.230)	0.214	0.088
173	14.42	0.87	0.303	(	0.229)	0.214	0.088
174	14.50	0.87	0.303	(	0.228)	0.214	0.088
175	14.58	0.87	0.303	(	0.227)	0.214	0.088
176	14.67	0.87	0.303	(	0.226)	0.214	0.088
177	14.75	0.87	0.303	(	0.224)	0.214	0.088
178	14.83	0.83	0.291	(	0.223)	0.206	0.085
179	14.92	0.83	0.291	(	0.222)	0.206	0.085
180	15.00	0.83	0.291	(	0.221)	0.206	0.085
181	15.08	0.80	0.279	(	0.220)	0.198	0.082
182	15.17	0.80	0.279	(	0.219)	0.198	0.082
183	15.25	0.80	0.279	(	0.218)	0.198	0.082
184	15.33	0.77	0.268	(	0.216)	0.190	0.078
185	15.42	0.77	0.268	(	0.215)	0.190	0.078
186	15.50	0.77	0.268	(	0.214)	0.190	0.078
187	15.58	0.63	0.221	(	0.213)	0.157	0.065
188	15.67	0.63	0.221	(	0.212)	0.157	0.065
189	15.75	0.63	0.221	(	0.211)	0.157	0.065
190	15.83	0.63	0.221	(	0.210)	0.157	0.065
191	15.92	0.63	0.221	(	0.209)	0.157	0.065
192	16.00	0.63	0.221	(	0.208)	0.157	0.065
193	16.08	0.13	0.047	(	0.207)	0.033	0.014
194	16.17	0.13	0.047	(	0.206)	0.033	0.014
195	16.25	0.13	0.047	(	0.205)	0.033	0.014
196	16.33	0.13	0.047	(	0.204)	0.033	0.014
197	16.42	0.13	0.047	(	0.202)	0.033	0.014
198	16.50	0.13	0.047	(	0.201)	0.033	0.014
199	16.58	0.10	0.035	(	0.200)	0.025	0.010
200	16.67	0.10	0.035	(	0.199)	0.025	0.010
201	16.75	0.10	0.035	(	0.198)	0.025	0.010
202	16.83	0.10	0.035	(	0.197)	0.025	0.010
203	16.92	0.10	0.035	(	0.196)	0.025	0.010
204	17.00	0.10	0.035	(	0.195)	0.025	0.010
205	17.08	0.17	0.058	(	0.194)	0.041	0.017
206	17.17	0.17	0.058	(	0.193)	0.041	0.017
207	17.25	0.17	0.058	(	0.192)	0.041	0.017
208	17.33	0.17	0.058	(	0.191)	0.041	0.017
209	17.42	0.17	0.058	(	0.191)	0.041	0.017

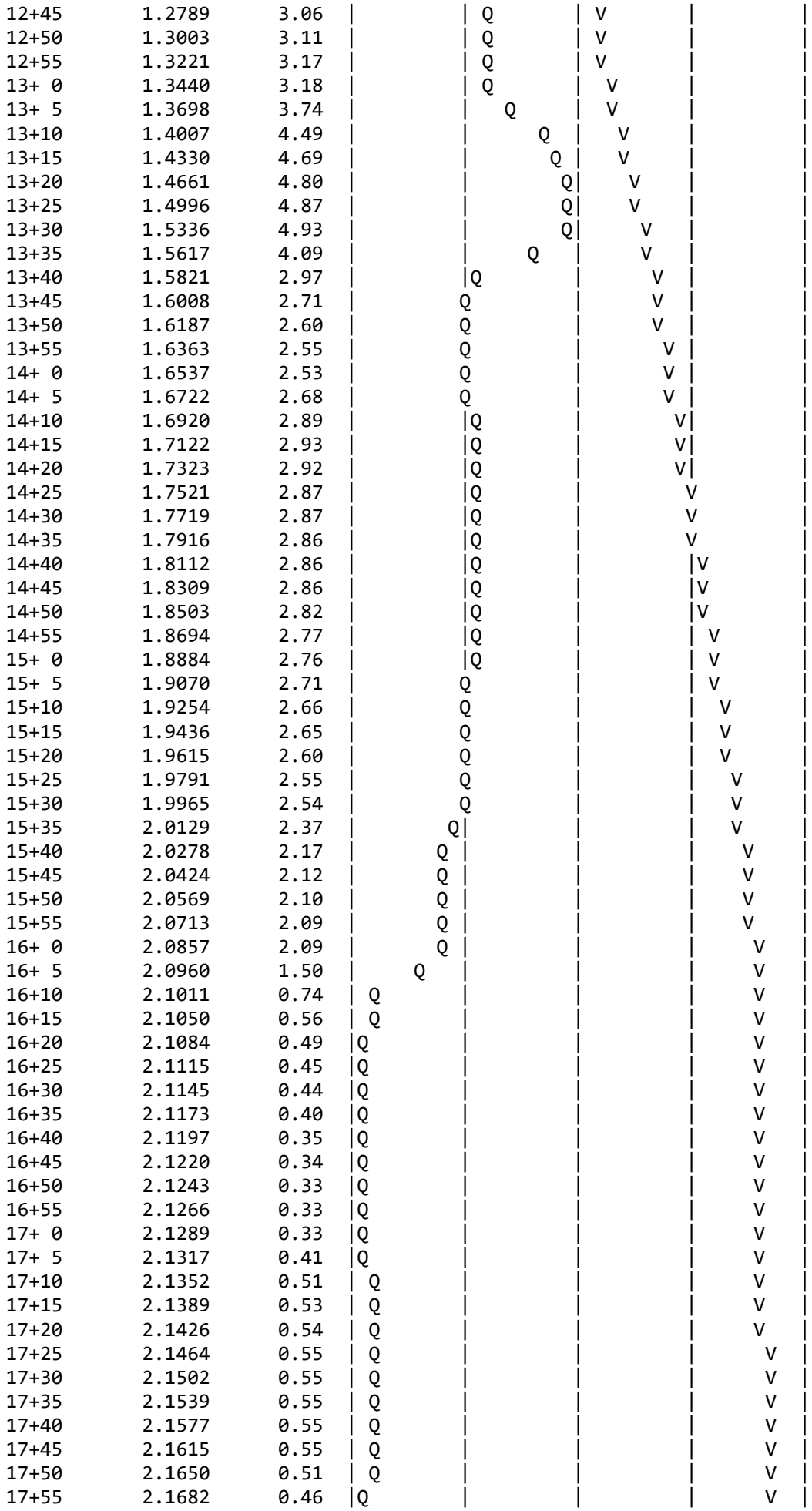
210	17.50	0.17	0.058	(0.190)	0.041	0.017
211	17.58	0.17	0.058	(0.189)	0.041	0.017
212	17.67	0.17	0.058	(0.188)	0.041	0.017
213	17.75	0.17	0.058	(0.187)	0.041	0.017
214	17.83	0.13	0.047	(0.186)	0.033	0.014
215	17.92	0.13	0.047	(0.185)	0.033	0.014
216	18.00	0.13	0.047	(0.184)	0.033	0.014
217	18.08	0.13	0.047	(0.183)	0.033	0.014
218	18.17	0.13	0.047	(0.182)	0.033	0.014
219	18.25	0.13	0.047	(0.181)	0.033	0.014
220	18.33	0.13	0.047	(0.180)	0.033	0.014
221	18.42	0.13	0.047	(0.180)	0.033	0.014
222	18.50	0.13	0.047	(0.179)	0.033	0.014
223	18.58	0.10	0.035	(0.178)	0.025	0.010
224	18.67	0.10	0.035	(0.177)	0.025	0.010
225	18.75	0.10	0.035	(0.176)	0.025	0.010
226	18.83	0.07	0.023	(0.175)	0.016	0.007
227	18.92	0.07	0.023	(0.174)	0.016	0.007
228	19.00	0.07	0.023	(0.174)	0.016	0.007
229	19.08	0.10	0.035	(0.173)	0.025	0.010
230	19.17	0.10	0.035	(0.172)	0.025	0.010
231	19.25	0.10	0.035	(0.171)	0.025	0.010
232	19.33	0.13	0.047	(0.170)	0.033	0.014
233	19.42	0.13	0.047	(0.170)	0.033	0.014
234	19.50	0.13	0.047	(0.169)	0.033	0.014
235	19.58	0.10	0.035	(0.168)	0.025	0.010
236	19.67	0.10	0.035	(0.167)	0.025	0.010
237	19.75	0.10	0.035	(0.166)	0.025	0.010
238	19.83	0.07	0.023	(0.166)	0.016	0.007
239	19.92	0.07	0.023	(0.165)	0.016	0.007
240	20.00	0.07	0.023	(0.164)	0.016	0.007
241	20.08	0.10	0.035	(0.164)	0.025	0.010
242	20.17	0.10	0.035	(0.163)	0.025	0.010
243	20.25	0.10	0.035	(0.162)	0.025	0.010
244	20.33	0.10	0.035	(0.161)	0.025	0.010
245	20.42	0.10	0.035	(0.161)	0.025	0.010
246	20.50	0.10	0.035	(0.160)	0.025	0.010
247	20.58	0.10	0.035	(0.159)	0.025	0.010
248	20.67	0.10	0.035	(0.159)	0.025	0.010
249	20.75	0.10	0.035	(0.158)	0.025	0.010
250	20.83	0.07	0.023	(0.157)	0.016	0.007
251	20.92	0.07	0.023	(0.157)	0.016	0.007
252	21.00	0.07	0.023	(0.156)	0.016	0.007
253	21.08	0.10	0.035	(0.156)	0.025	0.010
254	21.17	0.10	0.035	(0.155)	0.025	0.010
255	21.25	0.10	0.035	(0.154)	0.025	0.010
256	21.33	0.07	0.023	(0.154)	0.016	0.007
257	21.42	0.07	0.023	(0.153)	0.016	0.007
258	21.50	0.07	0.023	(0.153)	0.016	0.007
259	21.58	0.10	0.035	(0.152)	0.025	0.010
260	21.67	0.10	0.035	(0.151)	0.025	0.010
261	21.75	0.10	0.035	(0.151)	0.025	0.010
262	21.83	0.07	0.023	(0.150)	0.016	0.007
263	21.92	0.07	0.023	(0.150)	0.016	0.007
264	22.00	0.07	0.023	(0.149)	0.016	0.007
265	22.08	0.10	0.035	(0.149)	0.025	0.010
266	22.17	0.10	0.035	(0.148)	0.025	0.010
267	22.25	0.10	0.035	(0.148)	0.025	0.010
268	22.33	0.07	0.023	(0.147)	0.016	0.007
269	22.42	0.07	0.023	(0.147)	0.016	0.007
270	22.50	0.07	0.023	(0.147)	0.016	0.007
271	22.58	0.07	0.023	(0.146)	0.016	0.007
272	22.67	0.07	0.023	(0.146)	0.016	0.007

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273  22.75     0.07      0.023       (  0.145)       0.016        0.007
274  22.83     0.07      0.023       (  0.145)       0.016        0.007
275  22.92     0.07      0.023       (  0.145)       0.016        0.007
276  23.00     0.07      0.023       (  0.144)       0.016        0.007
277  23.08     0.07      0.023       (  0.144)       0.016        0.007
278  23.17     0.07      0.023       (  0.144)       0.016        0.007
279  23.25     0.07      0.023       (  0.143)       0.016        0.007
280  23.33     0.07      0.023       (  0.143)       0.016        0.007
281  23.42     0.07      0.023       (  0.143)       0.016        0.007
282  23.50     0.07      0.023       (  0.142)       0.016        0.007
283  23.58     0.07      0.023       (  0.142)       0.016        0.007
284  23.67     0.07      0.023       (  0.142)       0.016        0.007
285  23.75     0.07      0.023       (  0.142)       0.016        0.007
286  23.83     0.07      0.023       (  0.142)       0.016        0.007
287  23.92     0.07      0.023       (  0.142)       0.016        0.007
288  24.00     0.07      0.023       (  0.141)       0.016        0.007
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    10.4
       Flood volume = Effective rainfall      0.87(In)
        times area      32.1(Ac.)/[(In)/(Ft.)] =       2.3(Ac.Ft)
       Total soil loss =      2.04(In)
       Total soil loss =     5.459(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =      100937.4 Cubic Feet
       Total soil loss =      237794.1 Cubic Feet
       ------------------------------------------------------------------
        Peak flow rate of this hydrograph =      4.926(CFS)
       ------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0005      0.08  Q         |         |         |         |
   0+10       0.0018      0.18  Q         |         |         |         |
   0+15       0.0032      0.20  Q         |         |         |         |
   0+20       0.0049      0.25  VQ        |         |         |         |
   0+25       0.0070      0.31  VQ        |         |         |         |
   0+30       0.0092      0.32  VQ        |         |         |         |
   0+35       0.0115      0.33  VQ        |         |         |         |
   0+40       0.0138      0.33  VQ        |         |         |         |
   0+45       0.0160      0.33  VQ        |         |         |         |
   0+50       0.0186      0.37  VQ        |         |         |         |
   0+55       0.0215      0.42  VQ        |         |         |         |
   1+ 0       0.0244      0.43  VQ        |         |         |         |
   1+ 5       0.0272      0.40  VQ        |         |         |         |
   1+10       0.0296      0.35  VQ        |         |         |         |
   1+15       0.0319      0.34  VQ        |         |         |         |
   1+20       0.0342      0.33  VQ        |         |         |         |
   1+25       0.0365      0.33  VQ        |         |         |         |
   1+30       0.0387      0.33  VQ        |         |         |         |
   1+35       0.0410      0.33  VQ        |         |         |         |
   1+40       0.0433      0.33  VQ        |         |         |         |
   1+45       0.0455      0.33  VQ        |         |         |         |
   1+50       0.0481      0.37  VQ        |         |         |         |
   1+55       0.0510      0.42  VQ        |         |         |         |
   2+ 0       0.0539      0.43  VQ        |         |         |         |
   2+ 5       0.0569      0.44  VQ        |         |         |         |
   2+10       0.0600      0.44  |Q        |         |         |         |
```

2+15	0.0630	0.44	Q				
2+20	0.0660	0.44	Q				
2+25	0.0691	0.44	Q				
2+30	0.0721	0.44	Q				
2+35	0.0754	0.48	Q				
2+40	0.0790	0.53	VQ				
2+45	0.0828	0.54	VQ				
2+50	0.0865	0.55	VQ				
2+55	0.0903	0.55	VQ				
3+ 0	0.0941	0.55	VQ				
3+ 5	0.0979	0.55	VQ				
3+10	0.1016	0.55	VQ				
3+15	0.1054	0.55	VQ				
3+20	0.1092	0.55	VQ				
3+25	0.1130	0.55	VQ				
3+30	0.1168	0.55	Q				
3+35	0.1206	0.55	Q				
3+40	0.1244	0.55	Q				
3+45	0.1281	0.55	Q				
3+50	0.1322	0.59	Q				
3+55	0.1366	0.64	Q				
4+ 0	0.1411	0.65	Q				
4+ 5	0.1456	0.66	Q				
4+10	0.1501	0.66	Q				
4+15	0.1547	0.66	Q				
4+20	0.1595	0.70	Q				
4+25	0.1646	0.75	Q				
4+30	0.1699	0.76	VQ				
4+35	0.1752	0.77	Q				
4+40	0.1804	0.77	Q				
4+45	0.1857	0.77	Q				
4+50	0.1913	0.81	Q				
4+55	0.1972	0.86	Q				
5+ 0	0.2032	0.87	Q				
5+ 5	0.2087	0.80	Q				
5+10	0.2135	0.70	QV				
5+15	0.2182	0.68	QV				
5+20	0.2230	0.71	QV				
5+25	0.2282	0.75	Q				
5+30	0.2335	0.76	QV				
5+35	0.2390	0.80	QV				
5+40	0.2449	0.86	QV				
5+45	0.2509	0.87	QV				
5+50	0.2569	0.88	QV				
5+55	0.2630	0.88	QV				
6+ 0	0.2690	0.88	QV				
6+ 5	0.2754	0.92	QV				
6+10	0.2820	0.97	QV				
6+15	0.2888	0.98	QV				
6+20	0.2956	0.99	Q V				
6+25	0.3024	0.99	Q V				
6+30	0.3092	0.99	Q V				
6+35	0.3163	1.03	QV				
6+40	0.3237	1.08	QV				
6+45	0.3312	1.09	QV				
6+50	0.3388	1.10	QV				
6+55	0.3463	1.10	QV				
7+ 0	0.3539	1.10	Q V				
7+ 5	0.3615	1.10	Q V				
7+10	0.3690	1.10	Q V				
7+15	0.3766	1.10	Q V				
7+20	0.3845	1.14	Q V				
7+25	0.3926	1.19	Q V				

```
 7+30       0.4009      1.20  |   Q V   |         |         |         |
 7+35       0.4095      1.24  |   Q  V  |         |         |         |
 7+40       0.4184      1.30  |    Q V  |         |         |         |
 7+45       0.4274      1.31  |    Q V  |         |         |         |
 7+50       0.4368      1.35  |    Q V  |         |         |         |
 7+55       0.4465      1.41  |    Q V  |         |         |         |
 8+ 0       0.4562      1.42  |    Q V  |         |         |         |
 8+ 5       0.4666      1.50  |     Q V |         |         |         |
 8+10       0.4777      1.61  |     Q V |         |         |         |
 8+15       0.4889      1.63  |     Q V |         |         |         |
 8+20       0.5002      1.64  |     Q V |         |         |         |
 8+25       0.5116      1.65  |     Q V |         |         |         |
 8+30       0.5229      1.65  |     Q  V|         |         |         |
 8+35       0.5345      1.69  |     Q  V|         |         |         |
 8+40       0.5465      1.74  |     Q  V|         |         |         |
 8+45       0.5586      1.75  |      Q V|         |         |         |
 8+50       0.5709      1.79  |      Q V|         |         |         |
 8+55       0.5836      1.85  |      Q  V         |         |         |
 9+ 0       0.5964      1.86  |      Q  V         |         |         |
 9+ 5       0.6098      1.94  |      Q  V         |         |         |
 9+10       0.6239      2.05  |       Q V         |         |         |
 9+15       0.6382      2.07  |       Q |V        |         |         |
 9+20       0.6528      2.12  |       Q |V        |         |         |
 9+25       0.6678      2.18  |       Q |V        |         |         |
 9+30       0.6829      2.19  |       Q |V        |         |         |
 9+35       0.6982      2.23  |       Q | V       |         |         |
 9+40       0.7140      2.29  |        Q| V       |         |         |
 9+45       0.7298      2.30  |        Q| V       |         |         |
 9+50       0.7460      2.34  |        Q| V       |         |         |
 9+55       0.7625      2.40  |        Q|  V      |         |         |
10+ 0       0.7791      2.41  |        Q|  V      |         |         |
10+ 5       0.7938      2.14  |       Q |  V      |         |         |
10+10       0.8061      1.79  |      Q  |  V      |         |         |
10+15       0.8179      1.71  |     Q   |   V     |         |         |
10+20       0.8294      1.67  |     Q   |   V     |         |         |
10+25       0.8408      1.65  |     Q   |   V     |         |         |
10+30       0.8522      1.65  |     Q   |   V     |         |         |
10+35       0.8649      1.84  |      Q  |   V     |         |         |
10+40       0.8793      2.10  |       Q |    V    |         |         |
10+45       0.8942      2.16  |       Q |    V    |         |         |
10+50       0.9092      2.18  |       Q |    V    |         |         |
10+55       0.9243      2.19  |       Q |    V    |         |         |
11+ 0       0.9394      2.20  |       Q |     V   |         |         |
11+ 5       0.9543      2.16  |       Q |     V   |         |         |
11+10       0.9688      2.11  |       Q |     V   |         |         |
11+15       0.9832      2.10  |       Q |     V   |         |         |
11+20       0.9977      2.09  |       Q |      V  |         |         |
11+25       1.0120      2.09  |       Q |      V  |         |         |
11+30       1.0264      2.09  |       Q |      V  |         |         |
11+35       1.0403      2.01  |       Q |      V  |         |         |
11+40       1.0534      1.91  |      Q  |       V |         |         |
11+45       1.0664      1.88  |      Q  |       V |         |         |
11+50       1.0796      1.91  |      Q  |       V |         |         |
11+55       1.0931      1.96  |      Q  |       V |         |         |
12+ 0       1.1066      1.97  |      Q  |        V|         |         |
12+ 5       1.1221      2.25  |       Q |        V|         |         |
12+10       1.1401      2.61  |         Q        V|         |         |
12+15       1.1586      2.69  |         Q        V|         |         |
12+20       1.1776      2.76  |         |Q        V         |         |
12+25       1.1971      2.83  |         |Q        V         |         |
12+30       1.2167      2.85  |         |Q        |V        |         |
12+35       1.2369      2.93  |         |Q        |V        |         |
12+40       1.2578      3.04  |         | Q       |V        |         |
```



12+45	1.2789	3.06	Q	V		
12+50	1.3003	3.11	Q	V		
12+55	1.3221	3.17	Q	V		
13+ 0	1.3440	3.18	Q	V		
13+ 5	1.3698	3.74	Q	V		
13+10	1.4007	4.49	Q	V		
13+15	1.4330	4.69	Q	V		
13+20	1.4661	4.80	Q	V		
13+25	1.4996	4.87	Q	V		
13+30	1.5336	4.93	Q	V		
13+35	1.5617	4.09	Q	V		
13+40	1.5821	2.97	Q	V		
13+45	1.6008	2.71	Q	V		
13+50	1.6187	2.60	Q	V		
13+55	1.6363	2.55	Q	V		
14+ 0	1.6537	2.53	Q	V		
14+ 5	1.6722	2.68	Q	V		
14+10	1.6920	2.89	Q	V		
14+15	1.7122	2.93	Q	V		
14+20	1.7323	2.92	Q	V		
14+25	1.7521	2.87	Q	V		
14+30	1.7719	2.87	Q	V		
14+35	1.7916	2.86	Q	V		
14+40	1.8112	2.86	Q	V		
14+45	1.8309	2.86	Q	V		
14+50	1.8503	2.82	Q	V		
14+55	1.8694	2.77	Q	V		
15+ 0	1.8884	2.76	Q	V		
15+ 5	1.9070	2.71	Q	V		
15+10	1.9254	2.66	Q	V		
15+15	1.9436	2.65	Q	V		
15+20	1.9615	2.60	Q	V		
15+25	1.9791	2.55	Q	V		
15+30	1.9965	2.54	Q	V		
15+35	2.0129	2.37	Q	V		
15+40	2.0278	2.17	Q	V		
15+45	2.0424	2.12	Q	V		
15+50	2.0569	2.10	Q	V		
15+55	2.0713	2.09	Q	V		
16+ 0	2.0857	2.09	Q	V		
16+ 5	2.0960	1.50	Q	V		
16+10	2.1011	0.74	Q	V		
16+15	2.1050	0.56	Q	V		
16+20	2.1084	0.49	Q	V		
16+25	2.1115	0.45	Q	V		
16+30	2.1145	0.44	Q	V		
16+35	2.1173	0.40	Q	V		
16+40	2.1197	0.35	Q	V		
16+45	2.1220	0.34	Q	V		
16+50	2.1243	0.33	Q	V		
16+55	2.1266	0.33	Q	V		
17+ 0	2.1289	0.33	Q	V		
17+ 5	2.1317	0.41	Q	V		
17+10	2.1352	0.51	Q	V		
17+15	2.1389	0.53	Q	V		
17+20	2.1426	0.54	Q	V		
17+25	2.1464	0.55	Q	V		
17+30	2.1502	0.55	Q	V		
17+35	2.1539	0.55	Q	V		
17+40	2.1577	0.55	Q	V		
17+45	2.1615	0.55	Q	V		
17+50	2.1650	0.51	Q	V		
17+55	2.1682	0.46	Q	V		

```
18+ 0       2.1713      0.45  |Q        |         |         |      V  |
18+ 5       2.1743      0.44  |Q        |         |         |      V  |
18+10       2.1774      0.44  |Q        |         |         |      V  |
18+15       2.1804      0.44  |Q        |         |         |      V  |
18+20       2.1834      0.44  |Q        |         |         |      V  |
18+25       2.1864      0.44  |Q        |         |         |      V  |
18+30       2.1895      0.44  |Q        |         |         |      V  |
18+35       2.1922      0.40  |Q        |         |         |      V  |
18+40       2.1946      0.35  |Q        |         |         |      V  |
18+45       2.1970      0.34  |Q        |         |         |      V  |
18+50       2.1990      0.29  |Q        |         |         |      V  |
18+55       2.2006      0.24  Q         |         |         |      V  |
19+ 0       2.2022      0.23  Q         |         |         |       V |
19+ 5       2.2040      0.26  |Q        |         |         |       V |
19+10       2.2062      0.31  |Q        |         |         |       V |
19+15       2.2084      0.32  |Q        |         |         |       V |
19+20       2.2109      0.37  |Q        |         |         |       V |
19+25       2.2138      0.42  |Q        |         |         |       V |
19+30       2.2167      0.43  |Q        |         |         |       V |
19+35       2.2195      0.40  |Q        |         |         |       V |
19+40       2.2219      0.35  |Q        |         |         |       V |
19+45       2.2242      0.34  |Q        |         |         |       V |
19+50       2.2262      0.29  |Q        |         |         |       V |
19+55       2.2279      0.24  Q         |         |         |       V |
20+ 0       2.2295      0.23  Q         |         |         |       V |
20+ 5       2.2313      0.26  |Q        |         |         |       V |
20+10       2.2334      0.31  |Q        |         |         |       V |
20+15       2.2356      0.32  |Q        |         |         |       V |
20+20       2.2379      0.33  |Q        |         |         |       V |
20+25       2.2401      0.33  |Q        |         |         |       V |
20+30       2.2424      0.33  |Q        |         |         |       V |
20+35       2.2447      0.33  |Q        |         |         |       V |
20+40       2.2469      0.33  |Q        |         |         |       V |
20+45       2.2492      0.33  |Q        |         |         |       V |
20+50       2.2512      0.29  |Q        |         |         |       V |
20+55       2.2529      0.24  Q         |         |         |       V |
21+ 0       2.2544      0.23  Q         |         |         |       V |
21+ 5       2.2562      0.26  |Q        |         |         |       V |
21+10       2.2584      0.31  |Q        |         |         |       V |
21+15       2.2606      0.32  |Q        |         |         |        V|
21+20       2.2626      0.29  |Q        |         |         |        V|
21+25       2.2642      0.24  Q         |         |         |        V|
21+30       2.2658      0.23  Q         |         |         |        V|
21+35       2.2676      0.26  |Q        |         |         |        V|
21+40       2.2697      0.31  |Q        |         |         |        V|
21+45       2.2720      0.32  |Q        |         |         |        V|
21+50       2.2739      0.29  |Q        |         |         |        V|
21+55       2.2756      0.24  Q         |         |         |        V|
22+ 0       2.2771      0.23  Q         |         |         |        V|
22+ 5       2.2790      0.26  |Q        |         |         |        V|
22+10       2.2811      0.31  |Q        |         |         |        V|
22+15       2.2833      0.32  |Q        |         |         |        V|
22+20       2.2853      0.29  |Q        |         |         |        V|
22+25       2.2869      0.24  Q         |         |         |        V|
22+30       2.2885      0.23  Q         |         |         |        V|
22+35       2.2900      0.22  Q         |         |         |        V|
22+40       2.2916      0.22  Q         |         |         |        V|
22+45       2.2931      0.22  Q         |         |         |        V|
22+50       2.2946      0.22  Q         |         |         |        V|
22+55       2.2961      0.22  Q         |         |         |        V|
23+ 0       2.2976      0.22  Q         |         |         |        V|
23+ 5       2.2991      0.22  Q         |         |         |        V|
23+10       2.3006      0.22  Q         |         |         |        V|
```

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   23+15       2.3022      0.22  Q         |          |          |         V|
   23+20       2.3037      0.22  Q         |          |          |         V|
   23+25       2.3052      0.22  Q         |          |          |         V|
   23+30       2.3067      0.22  Q         |          |          |         V|
   23+35       2.3082      0.22  Q         |          |          |         V|
   23+40       2.3097      0.22  Q         |          |          |         V|
   23+45       2.3112      0.22  Q         |          |          |         V|
   23+50       2.3128      0.22  Q         |          |          |         V|
   23+55       2.3143      0.22  Q         |          |          |         V|
   24+ 0       2.3158      0.22  Q         |          |          |         V|
   24+ 5       2.3168      0.14  Q         |          |          |         V|
   24+10       2.3170      0.04  Q         |          |          |         V|
   24+15       2.3171      0.02  Q         |          |          |         V|
   24+20       2.3172      0.01  Q         |          |          |         V|
   24+25       2.3172      0.00  Q         |          |          |          V
-------------------------------------------------------------------------
```

C.6 - Area "C"

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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 07/09/25 File: tcpc242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
DEBRIS BASIN C TRIBUTARY PROPOSED CONDITION
2-YEAR
24-HOUR

Drainage Area = 52.80(Ac.) = 0.082 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 52.80(Ac.) = 0.082 Sq. Mi.
Length along longest watercourse = 2517.00(Ft.)
Length along longest watercourse measured to centroid = 821.00(Ft.)
Length along longest watercourse = 0.477 Mi.
Length along longest watercourse measured to centroid = 0.155 Mi.
Difference in elevation = 398.50(Ft.)
Slope along watercourse = 835.9476 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.062 Hr.
Lag time = 3.73 Min.
25% of lag time = 0.93 Min.
40% of lag time = 1.49 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
52.80	1.80	95.04

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
52.80	4.50	237.60

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
52.800	83.70	0.000

Total Area Entered = 52.80(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
83.7	68.2	0.382	0.000	0.382	1.000	0.382
					Sum (F) =	0.382

Area averaged mean soil loss (F) (In/Hr) = 0.382
Minimum soil loss rate ((In/Hr)) = 0.191
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	134.059	29.118	15.495
2	0.167	268.119	48.070	25.579
3	0.250	402.178	12.210	6.497
4	0.333	536.238	5.422	2.885
5	0.417	670.297	2.956	1.573
6	0.500	804.356	2.224	1.183
		Sum = 100.000	Sum=	53.212

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.677)	0.013	0.001
2	0.17	0.07	0.014	(0.674)	0.013	0.001
3	0.25	0.07	0.014	(0.671)	0.013	0.001
4	0.33	0.10	0.022	(0.669)	0.019	0.002
5	0.42	0.10	0.022	(0.666)	0.019	0.002
6	0.50	0.10	0.022	(0.664)	0.019	0.002
7	0.58	0.10	0.022	(0.661)	0.019	0.002
8	0.67	0.10	0.022	(0.658)	0.019	0.002
9	0.75	0.10	0.022	(0.656)	0.019	0.002
10	0.83	0.13	0.029	(0.653)	0.026	0.003
11	0.92	0.13	0.029	(0.651)	0.026	0.003
12	1.00	0.13	0.029	(0.648)	0.026	0.003
13	1.08	0.10	0.022	(0.646)	0.019	0.002
14	1.17	0.10	0.022	(0.643)	0.019	0.002
15	1.25	0.10	0.022	(0.640)	0.019	0.002
16	1.33	0.10	0.022	(0.638)	0.019	0.002
17	1.42	0.10	0.022	(0.635)	0.019	0.002
18	1.50	0.10	0.022	(0.633)	0.019	0.002
19	1.58	0.10	0.022	(0.630)	0.019	0.002
20	1.67	0.10	0.022	(0.628)	0.019	0.002

21	1.75	0.10	0.022	(0.625)	0.019	0.002
22	1.83	0.13	0.029	(0.623)	0.026	0.003
23	1.92	0.13	0.029	(0.620)	0.026	0.003
24	2.00	0.13	0.029	(0.618)	0.026	0.003
25	2.08	0.13	0.029	(0.615)	0.026	0.003
26	2.17	0.13	0.029	(0.613)	0.026	0.003
27	2.25	0.13	0.029	(0.610)	0.026	0.003
28	2.33	0.13	0.029	(0.608)	0.026	0.003
29	2.42	0.13	0.029	(0.605)	0.026	0.003
30	2.50	0.13	0.029	(0.603)	0.026	0.003
31	2.58	0.17	0.036	(0.600)	0.032	0.004
32	2.67	0.17	0.036	(0.598)	0.032	0.004
33	2.75	0.17	0.036	(0.595)	0.032	0.004
34	2.83	0.17	0.036	(0.593)	0.032	0.004
35	2.92	0.17	0.036	(0.590)	0.032	0.004
36	3.00	0.17	0.036	(0.588)	0.032	0.004
37	3.08	0.17	0.036	(0.586)	0.032	0.004
38	3.17	0.17	0.036	(0.583)	0.032	0.004
39	3.25	0.17	0.036	(0.581)	0.032	0.004
40	3.33	0.17	0.036	(0.578)	0.032	0.004
41	3.42	0.17	0.036	(0.576)	0.032	0.004
42	3.50	0.17	0.036	(0.574)	0.032	0.004
43	3.58	0.17	0.036	(0.571)	0.032	0.004
44	3.67	0.17	0.036	(0.569)	0.032	0.004
45	3.75	0.17	0.036	(0.566)	0.032	0.004
46	3.83	0.20	0.043	(0.564)	0.039	0.004
47	3.92	0.20	0.043	(0.562)	0.039	0.004
48	4.00	0.20	0.043	(0.559)	0.039	0.004
49	4.08	0.20	0.043	(0.557)	0.039	0.004
50	4.17	0.20	0.043	(0.554)	0.039	0.004
51	4.25	0.20	0.043	(0.552)	0.039	0.004
52	4.33	0.23	0.050	(0.550)	0.045	0.005
53	4.42	0.23	0.050	(0.547)	0.045	0.005
54	4.50	0.23	0.050	(0.545)	0.045	0.005
55	4.58	0.23	0.050	(0.543)	0.045	0.005
56	4.67	0.23	0.050	(0.540)	0.045	0.005
57	4.75	0.23	0.050	(0.538)	0.045	0.005
58	4.83	0.27	0.058	(0.536)	0.052	0.006
59	4.92	0.27	0.058	(0.533)	0.052	0.006
60	5.00	0.27	0.058	(0.531)	0.052	0.006
61	5.08	0.20	0.043	(0.529)	0.039	0.004
62	5.17	0.20	0.043	(0.526)	0.039	0.004
63	5.25	0.20	0.043	(0.524)	0.039	0.004
64	5.33	0.23	0.050	(0.522)	0.045	0.005
65	5.42	0.23	0.050	(0.520)	0.045	0.005
66	5.50	0.23	0.050	(0.517)	0.045	0.005
67	5.58	0.27	0.058	(0.515)	0.052	0.006
68	5.67	0.27	0.058	(0.513)	0.052	0.006
69	5.75	0.27	0.058	(0.511)	0.052	0.006
70	5.83	0.27	0.058	(0.508)	0.052	0.006
71	5.92	0.27	0.058	(0.506)	0.052	0.006
72	6.00	0.27	0.058	(0.504)	0.052	0.006
73	6.08	0.30	0.065	(0.502)	0.058	0.006
74	6.17	0.30	0.065	(0.499)	0.058	0.006
75	6.25	0.30	0.065	(0.497)	0.058	0.006
76	6.33	0.30	0.065	(0.495)	0.058	0.006
77	6.42	0.30	0.065	(0.493)	0.058	0.006
78	6.50	0.30	0.065	(0.490)	0.058	0.006
79	6.58	0.33	0.072	(0.488)	0.065	0.007
80	6.67	0.33	0.072	(0.486)	0.065	0.007
81	6.75	0.33	0.072	(0.484)	0.065	0.007
82	6.83	0.33	0.072	(0.482)	0.065	0.007
83	6.92	0.33	0.072	(0.479)	0.065	0.007

84	7.00	0.33	0.072	(0.477)	0.065	0.007
85	7.08	0.33	0.072	(0.475)	0.065	0.007
86	7.17	0.33	0.072	(0.473)	0.065	0.007
87	7.25	0.33	0.072	(0.471)	0.065	0.007
88	7.33	0.37	0.079	(0.469)	0.071	0.008
89	7.42	0.37	0.079	(0.467)	0.071	0.008
90	7.50	0.37	0.079	(0.464)	0.071	0.008
91	7.58	0.40	0.086	(0.462)	0.078	0.009
92	7.67	0.40	0.086	(0.460)	0.078	0.009
93	7.75	0.40	0.086	(0.458)	0.078	0.009
94	7.83	0.43	0.094	(0.456)	0.084	0.009
95	7.92	0.43	0.094	(0.454)	0.084	0.009
96	8.00	0.43	0.094	(0.452)	0.084	0.009
97	8.08	0.50	0.108	(0.450)	0.097	0.011
98	8.17	0.50	0.108	(0.447)	0.097	0.011
99	8.25	0.50	0.108	(0.445)	0.097	0.011
100	8.33	0.50	0.108	(0.443)	0.097	0.011
101	8.42	0.50	0.108	(0.441)	0.097	0.011
102	8.50	0.50	0.108	(0.439)	0.097	0.011
103	8.58	0.53	0.115	(0.437)	0.104	0.012
104	8.67	0.53	0.115	(0.435)	0.104	0.012
105	8.75	0.53	0.115	(0.433)	0.104	0.012
106	8.83	0.57	0.122	(0.431)	0.110	0.012
107	8.92	0.57	0.122	(0.429)	0.110	0.012
108	9.00	0.57	0.122	(0.427)	0.110	0.012
109	9.08	0.63	0.137	(0.425)	0.123	0.014
110	9.17	0.63	0.137	(0.423)	0.123	0.014
111	9.25	0.63	0.137	(0.421)	0.123	0.014
112	9.33	0.67	0.144	(0.419)	0.130	0.014
113	9.42	0.67	0.144	(0.417)	0.130	0.014
114	9.50	0.67	0.144	(0.415)	0.130	0.014
115	9.58	0.70	0.151	(0.413)	0.136	0.015
116	9.67	0.70	0.151	(0.411)	0.136	0.015
117	9.75	0.70	0.151	(0.409)	0.136	0.015
118	9.83	0.73	0.158	(0.407)	0.143	0.016
119	9.92	0.73	0.158	(0.405)	0.143	0.016
120	10.00	0.73	0.158	(0.403)	0.143	0.016
121	10.08	0.50	0.108	(0.401)	0.097	0.011
122	10.17	0.50	0.108	(0.399)	0.097	0.011
123	10.25	0.50	0.108	(0.397)	0.097	0.011
124	10.33	0.50	0.108	(0.395)	0.097	0.011
125	10.42	0.50	0.108	(0.393)	0.097	0.011
126	10.50	0.50	0.108	(0.391)	0.097	0.011
127	10.58	0.67	0.144	(0.390)	0.130	0.014
128	10.67	0.67	0.144	(0.388)	0.130	0.014
129	10.75	0.67	0.144	(0.386)	0.130	0.014
130	10.83	0.67	0.144	(0.384)	0.130	0.014
131	10.92	0.67	0.144	(0.382)	0.130	0.014
132	11.00	0.67	0.144	(0.380)	0.130	0.014
133	11.08	0.63	0.137	(0.378)	0.123	0.014
134	11.17	0.63	0.137	(0.376)	0.123	0.014
135	11.25	0.63	0.137	(0.374)	0.123	0.014
136	11.33	0.63	0.137	(0.373)	0.123	0.014
137	11.42	0.63	0.137	(0.371)	0.123	0.014
138	11.50	0.63	0.137	(0.369)	0.123	0.014
139	11.58	0.57	0.122	(0.367)	0.110	0.012
140	11.67	0.57	0.122	(0.365)	0.110	0.012
141	11.75	0.57	0.122	(0.363)	0.110	0.012
142	11.83	0.60	0.130	(0.362)	0.117	0.013
143	11.92	0.60	0.130	(0.360)	0.117	0.013
144	12.00	0.60	0.130	(0.358)	0.117	0.013
145	12.08	0.83	0.180	(0.356)	0.162	0.018
146	12.17	0.83	0.180	(0.354)	0.162	0.018

147	12.25	0.83	0.180	(0.353)	0.162	0.018
148	12.33	0.87	0.187	(0.351)	0.168	0.019
149	12.42	0.87	0.187	(0.349)	0.168	0.019
150	12.50	0.87	0.187	(0.347)	0.168	0.019
151	12.58	0.93	0.202	(0.346)	0.181	0.020
152	12.67	0.93	0.202	(0.344)	0.181	0.020
153	12.75	0.93	0.202	(0.342)	0.181	0.020
154	12.83	0.97	0.209	(0.340)	0.188	0.021
155	12.92	0.97	0.209	(0.339)	0.188	0.021
156	13.00	0.97	0.209	(0.337)	0.188	0.021
157	13.08	1.13	0.245	(0.335)	0.220	0.024
158	13.17	1.13	0.245	(0.334)	0.220	0.024
159	13.25	1.13	0.245	(0.332)	0.220	0.024
160	13.33	1.13	0.245	(0.330)	0.220	0.024
161	13.42	1.13	0.245	(0.329)	0.220	0.024
162	13.50	1.13	0.245	(0.327)	0.220	0.024
163	13.58	0.77	0.166	(0.325)	0.149	0.017
164	13.67	0.77	0.166	(0.324)	0.149	0.017
165	13.75	0.77	0.166	(0.322)	0.149	0.017
166	13.83	0.77	0.166	(0.320)	0.149	0.017
167	13.92	0.77	0.166	(0.319)	0.149	0.017
168	14.00	0.77	0.166	(0.317)	0.149	0.017
169	14.08	0.90	0.194	(0.315)	0.175	0.019
170	14.17	0.90	0.194	(0.314)	0.175	0.019
171	14.25	0.90	0.194	(0.312)	0.175	0.019
172	14.33	0.87	0.187	(0.311)	0.168	0.019
173	14.42	0.87	0.187	(0.309)	0.168	0.019
174	14.50	0.87	0.187	(0.307)	0.168	0.019
175	14.58	0.87	0.187	(0.306)	0.168	0.019
176	14.67	0.87	0.187	(0.304)	0.168	0.019
177	14.75	0.87	0.187	(0.303)	0.168	0.019
178	14.83	0.83	0.180	(0.301)	0.162	0.018
179	14.92	0.83	0.180	(0.300)	0.162	0.018
180	15.00	0.83	0.180	(0.298)	0.162	0.018
181	15.08	0.80	0.173	(0.297)	0.156	0.017
182	15.17	0.80	0.173	(0.295)	0.156	0.017
183	15.25	0.80	0.173	(0.294)	0.156	0.017
184	15.33	0.77	0.166	(0.292)	0.149	0.017
185	15.42	0.77	0.166	(0.291)	0.149	0.017
186	15.50	0.77	0.166	(0.289)	0.149	0.017
187	15.58	0.63	0.137	(0.288)	0.123	0.014
188	15.67	0.63	0.137	(0.286)	0.123	0.014
189	15.75	0.63	0.137	(0.285)	0.123	0.014
190	15.83	0.63	0.137	(0.283)	0.123	0.014
191	15.92	0.63	0.137	(0.282)	0.123	0.014
192	16.00	0.63	0.137	(0.280)	0.123	0.014
193	16.08	0.13	0.029	(0.279)	0.026	0.003
194	16.17	0.13	0.029	(0.277)	0.026	0.003
195	16.25	0.13	0.029	(0.276)	0.026	0.003
196	16.33	0.13	0.029	(0.275)	0.026	0.003
197	16.42	0.13	0.029	(0.273)	0.026	0.003
198	16.50	0.13	0.029	(0.272)	0.026	0.003
199	16.58	0.10	0.022	(0.270)	0.019	0.002
200	16.67	0.10	0.022	(0.269)	0.019	0.002
201	16.75	0.10	0.022	(0.268)	0.019	0.002
202	16.83	0.10	0.022	(0.266)	0.019	0.002
203	16.92	0.10	0.022	(0.265)	0.019	0.002
204	17.00	0.10	0.022	(0.264)	0.019	0.002
205	17.08	0.17	0.036	(0.262)	0.032	0.004
206	17.17	0.17	0.036	(0.261)	0.032	0.004
207	17.25	0.17	0.036	(0.260)	0.032	0.004
208	17.33	0.17	0.036	(0.258)	0.032	0.004
209	17.42	0.17	0.036	(0.257)	0.032	0.004

210	17.50	0.17	0.036	(0.256)	0.032	0.004
211	17.58	0.17	0.036	(0.254)	0.032	0.004
212	17.67	0.17	0.036	(0.253)	0.032	0.004
213	17.75	0.17	0.036	(0.252)	0.032	0.004
214	17.83	0.13	0.029	(0.251)	0.026	0.003
215	17.92	0.13	0.029	(0.249)	0.026	0.003
216	18.00	0.13	0.029	(0.248)	0.026	0.003
217	18.08	0.13	0.029	(0.247)	0.026	0.003
218	18.17	0.13	0.029	(0.246)	0.026	0.003
219	18.25	0.13	0.029	(0.245)	0.026	0.003
220	18.33	0.13	0.029	(0.243)	0.026	0.003
221	18.42	0.13	0.029	(0.242)	0.026	0.003
222	18.50	0.13	0.029	(0.241)	0.026	0.003
223	18.58	0.10	0.022	(0.240)	0.019	0.002
224	18.67	0.10	0.022	(0.239)	0.019	0.002
225	18.75	0.10	0.022	(0.238)	0.019	0.002
226	18.83	0.07	0.014	(0.236)	0.013	0.001
227	18.92	0.07	0.014	(0.235)	0.013	0.001
228	19.00	0.07	0.014	(0.234)	0.013	0.001
229	19.08	0.10	0.022	(0.233)	0.019	0.002
230	19.17	0.10	0.022	(0.232)	0.019	0.002
231	19.25	0.10	0.022	(0.231)	0.019	0.002
232	19.33	0.13	0.029	(0.230)	0.026	0.003
233	19.42	0.13	0.029	(0.229)	0.026	0.003
234	19.50	0.13	0.029	(0.228)	0.026	0.003
235	19.58	0.10	0.022	(0.227)	0.019	0.002
236	19.67	0.10	0.022	(0.226)	0.019	0.002
237	19.75	0.10	0.022	(0.225)	0.019	0.002
238	19.83	0.07	0.014	(0.224)	0.013	0.001
239	19.92	0.07	0.014	(0.223)	0.013	0.001
240	20.00	0.07	0.014	(0.222)	0.013	0.001
241	20.08	0.10	0.022	(0.221)	0.019	0.002
242	20.17	0.10	0.022	(0.220)	0.019	0.002
243	20.25	0.10	0.022	(0.219)	0.019	0.002
244	20.33	0.10	0.022	(0.218)	0.019	0.002
245	20.42	0.10	0.022	(0.217)	0.019	0.002
246	20.50	0.10	0.022	(0.216)	0.019	0.002
247	20.58	0.10	0.022	(0.215)	0.019	0.002
248	20.67	0.10	0.022	(0.214)	0.019	0.002
249	20.75	0.10	0.022	(0.213)	0.019	0.002
250	20.83	0.07	0.014	(0.212)	0.013	0.001
251	20.92	0.07	0.014	(0.211)	0.013	0.001
252	21.00	0.07	0.014	(0.211)	0.013	0.001
253	21.08	0.10	0.022	(0.210)	0.019	0.002
254	21.17	0.10	0.022	(0.209)	0.019	0.002
255	21.25	0.10	0.022	(0.208)	0.019	0.002
256	21.33	0.07	0.014	(0.207)	0.013	0.001
257	21.42	0.07	0.014	(0.207)	0.013	0.001
258	21.50	0.07	0.014	(0.206)	0.013	0.001
259	21.58	0.10	0.022	(0.205)	0.019	0.002
260	21.67	0.10	0.022	(0.204)	0.019	0.002
261	21.75	0.10	0.022	(0.204)	0.019	0.002
262	21.83	0.07	0.014	(0.203)	0.013	0.001
263	21.92	0.07	0.014	(0.202)	0.013	0.001
264	22.00	0.07	0.014	(0.202)	0.013	0.001
265	22.08	0.10	0.022	(0.201)	0.019	0.002
266	22.17	0.10	0.022	(0.200)	0.019	0.002
267	22.25	0.10	0.022	(0.200)	0.019	0.002
268	22.33	0.07	0.014	(0.199)	0.013	0.001
269	22.42	0.07	0.014	(0.198)	0.013	0.001
270	22.50	0.07	0.014	(0.198)	0.013	0.001
271	22.58	0.07	0.014	(0.197)	0.013	0.001
272	22.67	0.07	0.014	(0.197)	0.013	0.001

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273  22.75     0.07      0.014       (  0.196)       0.013        0.001
274  22.83     0.07      0.014       (  0.196)       0.013        0.001
275  22.92     0.07      0.014       (  0.195)       0.013        0.001
276  23.00     0.07      0.014       (  0.195)       0.013        0.001
277  23.08     0.07      0.014       (  0.194)       0.013        0.001
278  23.17     0.07      0.014       (  0.194)       0.013        0.001
279  23.25     0.07      0.014       (  0.193)       0.013        0.001
280  23.33     0.07      0.014       (  0.193)       0.013        0.001
281  23.42     0.07      0.014       (  0.193)       0.013        0.001
282  23.50     0.07      0.014       (  0.192)       0.013        0.001
283  23.58     0.07      0.014       (  0.192)       0.013        0.001
284  23.67     0.07      0.014       (  0.192)       0.013        0.001
285  23.75     0.07      0.014       (  0.191)       0.013        0.001
286  23.83     0.07      0.014       (  0.191)       0.013        0.001
287  23.92     0.07      0.014       (  0.191)       0.013        0.001
288  24.00     0.07      0.014       (  0.191)       0.013        0.001
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     2.2
       Flood volume = Effective rainfall      0.18(In)
        times area      52.8(Ac.)/[(In)/(Ft.)] =       0.8(Ac.Ft)
       Total soil loss =      1.62(In)
       Total soil loss =     7.127(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =       34496.0 Cubic Feet
       Total soil loss =      310463.7 Cubic Feet
       ------------------------------------------------------------------
        Peak flow rate of this hydrograph =      1.303(CFS)
       ------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0002      0.02  Q         |         |         |         |
   0+10       0.0006      0.06  Q         |         |         |         |
   0+15       0.0010      0.07  Q         |         |         |         |
   0+20       0.0016      0.08  Q         |         |         |         |
   0+25       0.0023      0.10  Q         |         |         |         |
   0+30       0.0031      0.11  Q         |         |         |         |
   0+35       0.0039      0.11  Q         |         |         |         |
   0+40       0.0047      0.11  Q         |         |         |         |
   0+45       0.0055      0.11  Q         |         |         |         |
   0+50       0.0063      0.13  Q         |         |         |         |
   0+55       0.0073      0.14  Q         |         |         |         |
   1+ 0       0.0083      0.15  Q         |         |         |         |
   1+ 5       0.0093      0.14  Q         |         |         |         |
   1+10       0.0102      0.12  Q         |         |         |         |
   1+15       0.0110      0.12  Q         |         |         |         |
   1+20       0.0118      0.12  Q         |         |         |         |
   1+25       0.0126      0.12  Q         |         |         |         |
   1+30       0.0134      0.11  Q         |         |         |         |
   1+35       0.0142      0.11  Q         |         |         |         |
   1+40       0.0150      0.11  Q         |         |         |         |
   1+45       0.0157      0.11  Q         |         |         |         |
   1+50       0.0166      0.13  Q         |         |         |         |
   1+55       0.0176      0.14  Q         |         |         |         |
   2+ 0       0.0186      0.15  Q         |         |         |         |
   2+ 5       0.0197      0.15  Q         |         |         |         |
   2+10       0.0207      0.15  QV        |         |         |         |
```

```
2+15       0.0218      0.15  QV        |         |         |         |
2+20       0.0228      0.15  QV        |         |         |         |
2+25       0.0239      0.15  QV        |         |         |         |
2+30       0.0250      0.15  QV        |         |         |         |
2+35       0.0261      0.16  QV        |         |         |         |
2+40       0.0273      0.18  QV        |         |         |         |
2+45       0.0286      0.19  QV        |         |         |         |
2+50       0.0299      0.19  QV        |         |         |         |
2+55       0.0313      0.19  QV        |         |         |         |
3+ 0       0.0326      0.19  QV        |         |         |         |
3+ 5       0.0339      0.19  QV        |         |         |         |
3+10       0.0352      0.19  QV        |         |         |         |
3+15       0.0365      0.19  QV        |         |         |         |
3+20       0.0379      0.19  QV        |         |         |         |
3+25       0.0392      0.19  QV        |         |         |         |
3+30       0.0405      0.19  Q V       |         |         |         |
3+35       0.0418      0.19  Q V       |         |         |         |
3+40       0.0431      0.19  Q V       |         |         |         |
3+45       0.0445      0.19  Q V       |         |         |         |
3+50       0.0459      0.20  Q V       |         |         |         |
3+55       0.0474      0.22  Q V       |         |         |         |
4+ 0       0.0489      0.23  Q V       |         |         |         |
4+ 5       0.0505      0.23  Q V       |         |         |         |
4+10       0.0521      0.23  Q V       |         |         |         |
4+15       0.0537      0.23  Q V       |         |         |         |
4+20       0.0553      0.24  Q V       |         |         |         |
4+25       0.0571      0.26  |QV       |         |         |         |
4+30       0.0589      0.26  |QV       |         |         |         |
4+35       0.0608      0.27  |Q V      |         |         |         |
4+40       0.0626      0.27  |Q V      |         |         |         |
4+45       0.0645      0.27  |Q V      |         |         |         |
4+50       0.0664      0.28  |Q V      |         |         |         |
4+55       0.0684      0.30  |Q V      |         |         |         |
5+ 0       0.0705      0.30  |Q V      |         |         |         |
5+ 5       0.0725      0.28  |Q V      |         |         |         |
5+10       0.0742      0.25  Q  V      |         |         |         |
5+15       0.0758      0.24  Q  V      |         |         |         |
5+20       0.0775      0.25  Q  V      |         |         |         |
5+25       0.0793      0.26  |Q  V      |         |         |         |
5+30       0.0811      0.26  |Q  V      |         |         |         |
5+35       0.0830      0.28  |Q  V      |         |         |         |
5+40       0.0851      0.30  |Q  V      |         |         |         |
5+45       0.0871      0.30  |Q  V      |         |         |         |
5+50       0.0892      0.30  |Q  V      |         |         |         |
5+55       0.0914      0.31  |Q  V      |         |         |         |
6+ 0       0.0935      0.31  |Q  V      |         |         |         |
6+ 5       0.0957      0.32  |Q  V      |         |         |         |
6+10       0.0980      0.34  |Q  V      |         |         |         |
6+15       0.1003      0.34  |Q   V     |         |         |         |
6+20       0.1027      0.34  |Q   V     |         |         |         |
6+25       0.1050      0.34  |Q   V     |         |         |         |
6+30       0.1074      0.34  |Q   V     |         |         |         |
6+35       0.1099      0.36  |Q   V     |         |         |         |
6+40       0.1125      0.37  |Q   V     |         |         |         |
6+45       0.1151      0.38  |Q   V     |         |         |         |
6+50       0.1177      0.38  |Q   V     |         |         |         |
6+55       0.1203      0.38  |Q    V    |         |         |         |
7+ 0       0.1230      0.38  |Q    V    |         |         |         |
7+ 5       0.1256      0.38  |Q    V    |         |         |         |
7+10       0.1282      0.38  |Q    V    |         |         |         |
7+15       0.1309      0.38  |Q    V    |         |         |         |
7+20       0.1336      0.39  |Q    V    |         |         |         |
7+25       0.1364      0.41  |Q    V    |         |         |         |
```

```
 7+30       0.1393      0.42  |Q     V  |          |          |          |
 7+35       0.1423      0.43  |Q     V  |          |          |          |
 7+40       0.1454      0.45  |Q     V  |          |          |          |
 7+45       0.1485      0.46  |Q     V  |          |          |          |
 7+50       0.1518      0.47  |Q     V  |          |          |          |
 7+55       0.1551      0.49  |Q     V  |          |          |          |
 8+ 0       0.1585      0.49  |Q      V |          |          |          |
 8+ 5       0.1621      0.52  | Q     V |          |          |          |
 8+10       0.1659      0.56  | Q     V |          |          |          |
 8+15       0.1698      0.57  | Q     V |          |          |          |
 8+20       0.1738      0.57  | Q     V |          |          |          |
 8+25       0.1777      0.57  | Q     V |          |          |          |
 8+30       0.1817      0.57  | Q      V|          |          |          |
 8+35       0.1857      0.59  | Q      V|          |          |          |
 8+40       0.1899      0.60  | Q      V|          |          |          |
 8+45       0.1941      0.61  | Q      V|          |          |          |
 8+50       0.1984      0.62  | Q       V          |          |          |
 8+55       0.2028      0.64  | Q       V          |          |          |
 9+ 0       0.2072      0.65  | Q       V          |          |          |
 9+ 5       0.2119      0.67  | Q       V          |          |          |
 9+10       0.2168      0.71  | Q       V          |          |          |
 9+15       0.2217      0.72  | Q       |V         |          |          |
 9+20       0.2268      0.74  | Q       |V         |          |          |
 9+25       0.2320      0.76  |  Q      |V         |          |          |
 9+30       0.2372      0.76  |  Q      |V         |          |          |
 9+35       0.2426      0.78  |  Q      | V        |          |          |
 9+40       0.2481      0.80  |  Q      | V        |          |          |
 9+45       0.2536      0.80  |  Q      | V        |          |          |
 9+50       0.2592      0.81  |  Q      |  V       |          |          |
 9+55       0.2649      0.83  |  Q      |  V       |          |          |
10+ 0       0.2707      0.84  |  Q      |  V       |          |          |
10+ 5       0.2760      0.76  |  Q      |  V       |          |          |
10+10       0.2803      0.64  | Q       |   V      |          |          |
10+15       0.2845      0.60  | Q       |   V      |          |          |
10+20       0.2885      0.59  | Q       |   V      |          |          |
10+25       0.2925      0.58  | Q       |   V      |          |          |
10+30       0.2965      0.57  | Q       |   V      |          |          |
10+35       0.3009      0.63  | Q       |    V     |          |          |
10+40       0.3058      0.72  | Q       |    V     |          |          |
10+45       0.3110      0.75  | Q       |    V     |          |          |
10+50       0.3162      0.76  |  Q      |    V     |          |          |
10+55       0.3214      0.76  |  Q      |     V    |          |          |
11+ 0       0.3267      0.77  |  Q      |     V    |          |          |
11+ 5       0.3319      0.76  |  Q      |     V    |          |          |
11+10       0.3370      0.74  | Q       |      V   |          |          |
11+15       0.3420      0.73  | Q       |      V   |          |          |
11+20       0.3471      0.73  | Q       |      V   |          |          |
11+25       0.3521      0.73  | Q       |      V   |          |          |
11+30       0.3571      0.73  | Q       |       V  |          |          |
11+35       0.3620      0.71  | Q       |       V  |          |          |
11+40       0.3666      0.67  | Q       |       V  |          |          |
11+45       0.3711      0.66  | Q       |       V  |          |          |
11+50       0.3757      0.67  | Q       |       V  |          |          |
11+55       0.3804      0.68  | Q       |        V |          |          |
12+ 0       0.3851      0.69  | Q       |        V |          |          |
12+ 5       0.3904      0.77  |  Q      |        V |          |          |
12+10       0.3966      0.90  |  Q      |         V          |          |
12+15       0.4030      0.93  |  Q      |         V          |          |
12+20       0.4096      0.96  |  Q      |         V          |          |
12+25       0.4163      0.98  |  Q      |          |V        |          |
12+30       0.4232      0.99  |  Q      |          |V        |          |
12+35       0.4302      1.02  |   Q     |          |V        |          |
12+40       0.4374      1.05  |   Q     |          | V       |          |
```

12+45	0.4448	1.07	Q		V	
12+50	0.4522	1.08	Q		V	
12+55	0.4598	1.10	Q		V	
13+ 0	0.4674	1.11	Q		V	
13+ 5	0.4754	1.17	Q		V	
13+10	0.4841	1.26	Q		V	
13+15	0.4929	1.28	Q		V	
13+20	0.5018	1.29	Q		V	
13+25	0.5108	1.30	Q		V	
13+30	0.5198	1.30	Q		V	
13+35	0.5279	1.18	Q		V	
13+40	0.5346	0.98	Q		V	
13+45	0.5410	0.93	Q		V	
13+50	0.5472	0.90	Q		V	
13+55	0.5534	0.89	Q		V	
14+ 0	0.5594	0.88	Q		V	
14+ 5	0.5658	0.93	Q		V	
14+10	0.5727	1.00	Q		V	
14+15	0.5797	1.02	Q		V	
14+20	0.5867	1.02	Q		V	
14+25	0.5936	1.00	Q		V	
14+30	0.6005	1.00	Q		V	
14+35	0.6074	1.00	Q		V	
14+40	0.6143	1.00	Q		V	
14+45	0.6211	1.00	Q		V	
14+50	0.6279	0.99	Q		V	
14+55	0.6346	0.97	Q		V	
15+ 0	0.6412	0.96	Q		V	
15+ 5	0.6477	0.95	Q		V	
15+10	0.6541	0.93	Q		V	
15+15	0.6605	0.92	Q		V	
15+20	0.6668	0.91	Q		V	
15+25	0.6729	0.89	Q		V	
15+30	0.6790	0.89	Q		V	
15+35	0.6848	0.84	Q		V	
15+40	0.6900	0.76	Q		V	
15+45	0.6952	0.74	Q		V	
15+50	0.7002	0.74	Q		V	
15+55	0.7053	0.73	Q		V	
16+ 0	0.7103	0.73	Q		V	
16+ 5	0.7142	0.56	Q		V	
16+10	0.7161	0.28	Q		V	
16+15	0.7176	0.21	Q		V	
16+20	0.7189	0.18	Q		V	
16+25	0.7200	0.17	Q		V	
16+30	0.7211	0.15	Q		V	
16+35	0.7220	0.14	Q		V	
16+40	0.7229	0.12	Q		V	
16+45	0.7237	0.12	Q		V	
16+50	0.7245	0.12	Q		V	
16+55	0.7253	0.12	Q		V	
17+ 0	0.7261	0.11	Q		V	
17+ 5	0.7270	0.14	Q		V	
17+10	0.7282	0.17	Q		V	
17+15	0.7295	0.18	Q		V	
17+20	0.7308	0.19	Q		V	
17+25	0.7321	0.19	Q		V	
17+30	0.7334	0.19	Q		V	
17+35	0.7347	0.19	Q		V	
17+40	0.7361	0.19	Q		V	
17+45	0.7374	0.19	Q		V	
17+50	0.7386	0.18	Q		V	
17+55	0.7397	0.16	Q		V	

18+ 0	0.7408	0.16	Q	|	|	|	V |
18+ 5	0.7419	0.16	Q	|	|	|	V |
18+10	0.7430	0.15	Q	|	|	|	V |
18+15	0.7440	0.15	Q	|	|	|	V |
18+20	0.7451	0.15	Q	|	|	|	V |
18+25	0.7461	0.15	Q	|	|	|	V |
18+30	0.7472	0.15	Q	|	|	|	V |
18+35	0.7482	0.14	Q	|	|	|	V |
18+40	0.7490	0.12	Q	|	|	|	V |
18+45	0.7498	0.12	Q	|	|	|	V |
18+50	0.7506	0.11	Q	|	|	|	V |
18+55	0.7512	0.09	Q	|	|	|	V |
19+ 0	0.7517	0.08	Q	|	|	|	V |
19+ 5	0.7523	0.09	Q	|	|	|	V |
19+10	0.7531	0.11	Q	|	|	|	V |
19+15	0.7538	0.11	Q	|	|	|	V |
19+20	0.7547	0.12	Q	|	|	|	V |
19+25	0.7557	0.14	Q	|	|	|	V |
19+30	0.7567	0.15	Q	|	|	|	V |
19+35	0.7577	0.14	Q	|	|	|	V |
19+40	0.7585	0.12	Q	|	|	|	V |
19+45	0.7593	0.12	Q	|	|	|	V |
19+50	0.7601	0.11	Q	|	|	|	V |
19+55	0.7607	0.09	Q	|	|	|	V |
20+ 0	0.7612	0.08	Q	|	|	|	V |
20+ 5	0.7618	0.09	Q	|	|	|	V |
20+10	0.7626	0.11	Q	|	|	|	V |
20+15	0.7633	0.11	Q	|	|	|	V |
20+20	0.7641	0.11	Q	|	|	|	V |
20+25	0.7649	0.11	Q	|	|	|	V |
20+30	0.7657	0.11	Q	|	|	|	V |
20+35	0.7665	0.11	Q	|	|	|	V |
20+40	0.7673	0.11	Q	|	|	|	V |
20+45	0.7681	0.11	Q	|	|	|	V |
20+50	0.7688	0.10	Q	|	|	|	V |
20+55	0.7694	0.09	Q	|	|	|	V |
21+ 0	0.7699	0.08	Q	|	|	|	V |
21+ 5	0.7705	0.09	Q	|	|	|	V |
21+10	0.7713	0.11	Q	|	|	|	V |
21+15	0.7720	0.11	Q	|	|	|	V |
21+20	0.7727	0.10	Q	|	|	|	V|
21+25	0.7733	0.08	Q	|	|	|	V|
21+30	0.7739	0.08	Q	|	|	|	V|
21+35	0.7745	0.09	Q	|	|	|	V|
21+40	0.7752	0.11	Q	|	|	|	V|
21+45	0.7760	0.11	Q	|	|	|	V|
21+50	0.7767	0.10	Q	|	|	|	V|
21+55	0.7773	0.08	Q	|	|	|	V|
22+ 0	0.7778	0.08	Q	|	|	|	V|
22+ 5	0.7785	0.09	Q	|	|	|	V|
22+10	0.7792	0.11	Q	|	|	|	V|
22+15	0.7800	0.11	Q	|	|	|	V|
22+20	0.7807	0.10	Q	|	|	|	V|
22+25	0.7813	0.08	Q	|	|	|	V|
22+30	0.7818	0.08	Q	|	|	|	V|
22+35	0.7823	0.08	Q	|	|	|	V|
22+40	0.7829	0.08	Q	|	|	|	V|
22+45	0.7834	0.08	Q	|	|	|	V|
22+50	0.7839	0.08	Q	|	|	|	V|
22+55	0.7845	0.08	Q	|	|	|	V|
23+ 0	0.7850	0.08	Q	|	|	|	V|
23+ 5	0.7855	0.08	Q	|	|	|	V|
23+10	0.7860	0.08	Q	|	|	|	V|

```
  23+15       0.7866      0.08  Q          |          |          |         V|
  23+20       0.7871      0.08  Q          |          |          |         V|
  23+25       0.7876      0.08  Q          |          |          |         V|
  23+30       0.7882      0.08  Q          |          |          |         V|
  23+35       0.7887      0.08  Q          |          |          |         V|
  23+40       0.7892      0.08  Q          |          |          |         V|
  23+45       0.7897      0.08  Q          |          |          |         V|
  23+50       0.7903      0.08  Q          |          |          |         V|
  23+55       0.7908      0.08  Q          |          |          |         V|
  24+ 0       0.7913      0.08  Q          |          |          |         V|
  24+ 5       0.7917      0.05  Q          |          |          |         V|
  24+10       0.7918      0.02  Q          |          |          |         V|
  24+15       0.7919      0.01  Q          |          |          |         V|
  24+20       0.7919      0.00  Q          |          |          |         V|
  24+25       0.7919      0.00  Q          |          |          |          V
-------------------------------------------------------------------------
```

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

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Study date 07/10/25 File: tcpc2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
DEBRIS BASIN C TRIBUTARY PROPOSED CONDITION
10-YEAR
24-HOUR

Drainage Area = 52.80(Ac.) = 0.082 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 52.80(Ac.) = 0.082 Sq. Mi.
Length along longest watercourse = 2517.00(Ft.)
Length along longest watercourse measured to centroid = 821.00(Ft.)
Length along longest watercourse = 0.477 Mi.
Length along longest watercourse measured to centroid = 0.155 Mi.
Difference in elevation = 398.50(Ft.)
Slope along watercourse = 835.9476 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.062 Hr.
Lag time = 3.73 Min.
25% of lag time = 0.93 Min.
40% of lag time = 1.49 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
52.80	1.80	95.04

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
52.80	4.50	237.60

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
52.800	83.70	0.000

Total Area Entered = 52.80(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
83.7	83.7	0.202	0.000	0.202	1.000	0.202
					Sum (F) =	0.202

Area averaged mean soil loss (F) (In/Hr) = 0.202
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	134.059	29.118	15.495
2	0.167	268.119	48.070	25.579
3	0.250	402.178	12.210	6.497
4	0.333	536.238	5.422	2.885
5	0.417	670.297	2.956	1.573
6	0.500	804.356	2.224	1.183
		Sum = 100.000	Sum=	53.212

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.358)	0.021	0.002
2	0.17	0.07	0.023	(0.356)	0.021	0.002
3	0.25	0.07	0.023	(0.355)	0.021	0.002
4	0.33	0.10	0.035	(0.354)	0.031	0.003
5	0.42	0.10	0.035	(0.352)	0.031	0.003
6	0.50	0.10	0.035	(0.351)	0.031	0.003
7	0.58	0.10	0.035	(0.350)	0.031	0.003
8	0.67	0.10	0.035	(0.348)	0.031	0.003
9	0.75	0.10	0.035	(0.347)	0.031	0.003
10	0.83	0.13	0.047	(0.345)	0.042	0.005
11	0.92	0.13	0.047	(0.344)	0.042	0.005
12	1.00	0.13	0.047	(0.343)	0.042	0.005
13	1.08	0.10	0.035	(0.341)	0.031	0.003
14	1.17	0.10	0.035	(0.340)	0.031	0.003
15	1.25	0.10	0.035	(0.339)	0.031	0.003
16	1.33	0.10	0.035	(0.337)	0.031	0.003
17	1.42	0.10	0.035	(0.336)	0.031	0.003
18	1.50	0.10	0.035	(0.335)	0.031	0.003
19	1.58	0.10	0.035	(0.333)	0.031	0.003
20	1.67	0.10	0.035	(0.332)	0.031	0.003

21	1.75	0.10	0.035	(0.331)	0.031	0.003
22	1.83	0.13	0.047	(0.329)	0.042	0.005
23	1.92	0.13	0.047	(0.328)	0.042	0.005
24	2.00	0.13	0.047	(0.327)	0.042	0.005
25	2.08	0.13	0.047	(0.325)	0.042	0.005
26	2.17	0.13	0.047	(0.324)	0.042	0.005
27	2.25	0.13	0.047	(0.323)	0.042	0.005
28	2.33	0.13	0.047	(0.321)	0.042	0.005
29	2.42	0.13	0.047	(0.320)	0.042	0.005
30	2.50	0.13	0.047	(0.319)	0.042	0.005
31	2.58	0.17	0.058	(0.317)	0.052	0.006
32	2.67	0.17	0.058	(0.316)	0.052	0.006
33	2.75	0.17	0.058	(0.315)	0.052	0.006
34	2.83	0.17	0.058	(0.314)	0.052	0.006
35	2.92	0.17	0.058	(0.312)	0.052	0.006
36	3.00	0.17	0.058	(0.311)	0.052	0.006
37	3.08	0.17	0.058	(0.310)	0.052	0.006
38	3.17	0.17	0.058	(0.308)	0.052	0.006
39	3.25	0.17	0.058	(0.307)	0.052	0.006
40	3.33	0.17	0.058	(0.306)	0.052	0.006
41	3.42	0.17	0.058	(0.305)	0.052	0.006
42	3.50	0.17	0.058	(0.303)	0.052	0.006
43	3.58	0.17	0.058	(0.302)	0.052	0.006
44	3.67	0.17	0.058	(0.301)	0.052	0.006
45	3.75	0.17	0.058	(0.299)	0.052	0.006
46	3.83	0.20	0.070	(0.298)	0.063	0.007
47	3.92	0.20	0.070	(0.297)	0.063	0.007
48	4.00	0.20	0.070	(0.296)	0.063	0.007
49	4.08	0.20	0.070	(0.294)	0.063	0.007
50	4.17	0.20	0.070	(0.293)	0.063	0.007
51	4.25	0.20	0.070	(0.292)	0.063	0.007
52	4.33	0.23	0.081	(0.291)	0.073	0.008
53	4.42	0.23	0.081	(0.289)	0.073	0.008
54	4.50	0.23	0.081	(0.288)	0.073	0.008
55	4.58	0.23	0.081	(0.287)	0.073	0.008
56	4.67	0.23	0.081	(0.286)	0.073	0.008
57	4.75	0.23	0.081	(0.285)	0.073	0.008
58	4.83	0.27	0.093	(0.283)	0.084	0.009
59	4.92	0.27	0.093	(0.282)	0.084	0.009
60	5.00	0.27	0.093	(0.281)	0.084	0.009
61	5.08	0.20	0.070	(0.280)	0.063	0.007
62	5.17	0.20	0.070	(0.278)	0.063	0.007
63	5.25	0.20	0.070	(0.277)	0.063	0.007
64	5.33	0.23	0.081	(0.276)	0.073	0.008
65	5.42	0.23	0.081	(0.275)	0.073	0.008
66	5.50	0.23	0.081	(0.274)	0.073	0.008
67	5.58	0.27	0.093	(0.272)	0.084	0.009
68	5.67	0.27	0.093	(0.271)	0.084	0.009
69	5.75	0.27	0.093	(0.270)	0.084	0.009
70	5.83	0.27	0.093	(0.269)	0.084	0.009
71	5.92	0.27	0.093	(0.268)	0.084	0.009
72	6.00	0.27	0.093	(0.266)	0.084	0.009
73	6.08	0.30	0.105	(0.265)	0.094	0.010
74	6.17	0.30	0.105	(0.264)	0.094	0.010
75	6.25	0.30	0.105	(0.263)	0.094	0.010
76	6.33	0.30	0.105	(0.262)	0.094	0.010
77	6.42	0.30	0.105	(0.261)	0.094	0.010
78	6.50	0.30	0.105	(0.259)	0.094	0.010
79	6.58	0.33	0.116	(0.258)	0.105	0.012
80	6.67	0.33	0.116	(0.257)	0.105	0.012
81	6.75	0.33	0.116	(0.256)	0.105	0.012
82	6.83	0.33	0.116	(0.255)	0.105	0.012
83	6.92	0.33	0.116	(0.254)	0.105	0.012

84	7.00	0.33	0.116	(	0.252)		0.105		0.012
85	7.08	0.33	0.116	(	0.251)		0.105		0.012
86	7.17	0.33	0.116	(	0.250)		0.105		0.012
87	7.25	0.33	0.116	(	0.249)		0.105		0.012
88	7.33	0.37	0.128	(	0.248)		0.115		0.013
89	7.42	0.37	0.128	(	0.247)		0.115		0.013
90	7.50	0.37	0.128	(	0.246)		0.115		0.013
91	7.58	0.40	0.140	(	0.244)		0.126		0.014
92	7.67	0.40	0.140	(	0.243)		0.126		0.014
93	7.75	0.40	0.140	(	0.242)		0.126		0.014
94	7.83	0.43	0.151	(	0.241)		0.136		0.015
95	7.92	0.43	0.151	(	0.240)		0.136		0.015
96	8.00	0.43	0.151	(	0.239)		0.136		0.015
97	8.08	0.50	0.175	(	0.238)		0.157		0.017
98	8.17	0.50	0.175	(	0.237)		0.157		0.017
99	8.25	0.50	0.175	(	0.236)		0.157		0.017
100	8.33	0.50	0.175	(	0.234)		0.157		0.017
101	8.42	0.50	0.175	(	0.233)		0.157		0.017
102	8.50	0.50	0.175	(	0.232)		0.157		0.017
103	8.58	0.53	0.186	(	0.231)		0.168		0.019
104	8.67	0.53	0.186	(	0.230)		0.168		0.019
105	8.75	0.53	0.186	(	0.229)		0.168		0.019
106	8.83	0.57	0.198	(	0.228)		0.178		0.020
107	8.92	0.57	0.198	(	0.227)		0.178		0.020
108	9.00	0.57	0.198	(	0.226)		0.178		0.020
109	9.08	0.63	0.221	(	0.225)		0.199		0.022
110	9.17	0.63	0.221	(	0.224)		0.199		0.022
111	9.25	0.63	0.221	(	0.223)		0.199		0.022
112	9.33	0.67	0.233	(	0.221)		0.210		0.023
113	9.42	0.67	0.233	(	0.220)		0.210		0.023
114	9.50	0.67	0.233	(	0.219)		0.210		0.023
115	9.58	0.70	0.244		0.218	(	0.220)		0.026
116	9.67	0.70	0.244		0.217	(	0.220)		0.027
117	9.75	0.70	0.244		0.216	(	0.220)		0.028
118	9.83	0.73	0.256		0.215	(	0.231)		0.041
119	9.92	0.73	0.256		0.214	(	0.231)		0.042
120	10.00	0.73	0.256		0.213	(	0.231)		0.043
121	10.08	0.50	0.175	(	0.212)		0.157		0.017
122	10.17	0.50	0.175	(	0.211)		0.157		0.017
123	10.25	0.50	0.175	(	0.210)		0.157		0.017
124	10.33	0.50	0.175	(	0.209)		0.157		0.017
125	10.42	0.50	0.175	(	0.208)		0.157		0.017
126	10.50	0.50	0.175	(	0.207)		0.157		0.017
127	10.58	0.67	0.233		0.206	(	0.210)		0.027
128	10.67	0.67	0.233		0.205	(	0.210)		0.028
129	10.75	0.67	0.233		0.204	(	0.210)		0.029
130	10.83	0.67	0.233		0.203	(	0.210)		0.030
131	10.92	0.67	0.233		0.202	(	0.210)		0.031
132	11.00	0.67	0.233		0.201	(	0.210)		0.032
133	11.08	0.63	0.221	(	0.200)		0.199		0.022
134	11.17	0.63	0.221		0.199	(	0.199)		0.022
135	11.25	0.63	0.221		0.198	(	0.199)		0.023
136	11.33	0.63	0.221		0.197	(	0.199)		0.024
137	11.42	0.63	0.221		0.196	(	0.199)		0.025
138	11.50	0.63	0.221		0.195	(	0.199)		0.026
139	11.58	0.57	0.198	(	0.194)		0.178		0.020
140	11.67	0.57	0.198	(	0.193)		0.178		0.020
141	11.75	0.57	0.198	(	0.192)		0.178		0.020
142	11.83	0.60	0.210	(	0.191)		0.189		0.021
143	11.92	0.60	0.210	(	0.190)		0.189		0.021
144	12.00	0.60	0.210	(	0.189)		0.189		0.021
145	12.08	0.83	0.291		0.188	(	0.262)		0.103
146	12.17	0.83	0.291		0.187	(	0.262)		0.104

147	12.25	0.83	0.291		0.187	(0.262)		0.105
148	12.33	0.87	0.303		0.186	(0.272)		0.117
149	12.42	0.87	0.303		0.185	(0.272)		0.118
150	12.50	0.87	0.303		0.184	(0.272)		0.119
151	12.58	0.93	0.326		0.183	(0.293)		0.143
152	12.67	0.93	0.326		0.182	(0.293)		0.144
153	12.75	0.93	0.326		0.181	(0.293)		0.145
154	12.83	0.97	0.338		0.180	(0.304)		0.158
155	12.92	0.97	0.338		0.179	(0.304)		0.158
156	13.00	0.97	0.338		0.178	(0.304)		0.159
157	13.08	1.13	0.396		0.177	(0.356)		0.219
158	13.17	1.13	0.396		0.176	(0.356)		0.219
159	13.25	1.13	0.396		0.176	(0.356)		0.220
160	13.33	1.13	0.396		0.175	(0.356)		0.221
161	13.42	1.13	0.396		0.174	(0.356)		0.222
162	13.50	1.13	0.396		0.173	(0.356)		0.223
163	13.58	0.77	0.268		0.172	(0.241)		0.096
164	13.67	0.77	0.268		0.171	(0.241)		0.097
165	13.75	0.77	0.268		0.170	(0.241)		0.098
166	13.83	0.77	0.268		0.169	(0.241)		0.098
167	13.92	0.77	0.268		0.169	(0.241)		0.099
168	14.00	0.77	0.268		0.168	(0.241)		0.100
169	14.08	0.90	0.314		0.167	(0.283)		0.148
170	14.17	0.90	0.314		0.166	(0.283)		0.148
171	14.25	0.90	0.314		0.165	(0.283)		0.149
172	14.33	0.87	0.303		0.164	(0.272)		0.138
173	14.42	0.87	0.303		0.163	(0.272)		0.139
174	14.50	0.87	0.303		0.163	(0.272)		0.140
175	14.58	0.87	0.303		0.162	(0.272)		0.141
176	14.67	0.87	0.303		0.161	(0.272)		0.142
177	14.75	0.87	0.303		0.160	(0.272)		0.143
178	14.83	0.83	0.291		0.159	(0.262)		0.132
179	14.92	0.83	0.291		0.158	(0.262)		0.133
180	15.00	0.83	0.291		0.158	(0.262)		0.133
181	15.08	0.80	0.279		0.157	(0.251)		0.123
182	15.17	0.80	0.279		0.156	(0.251)		0.123
183	15.25	0.80	0.279		0.155	(0.251)		0.124
184	15.33	0.77	0.268		0.154	(0.241)		0.113
185	15.42	0.77	0.268		0.154	(0.241)		0.114
186	15.50	0.77	0.268		0.153	(0.241)		0.115
187	15.58	0.63	0.221		0.152	(0.199)		0.069
188	15.67	0.63	0.221		0.151	(0.199)		0.070
189	15.75	0.63	0.221		0.151	(0.199)		0.071
190	15.83	0.63	0.221		0.150	(0.199)		0.071
191	15.92	0.63	0.221		0.149	(0.199)		0.072
192	16.00	0.63	0.221		0.148	(0.199)		0.073
193	16.08	0.13	0.047	(0.147)		0.042		0.005
194	16.17	0.13	0.047	(0.147)		0.042		0.005
195	16.25	0.13	0.047	(0.146)		0.042		0.005
196	16.33	0.13	0.047	(0.145)		0.042		0.005
197	16.42	0.13	0.047	(0.144)		0.042		0.005
198	16.50	0.13	0.047	(0.144)		0.042		0.005
199	16.58	0.10	0.035	(0.143)		0.031		0.003
200	16.67	0.10	0.035	(0.142)		0.031		0.003
201	16.75	0.10	0.035	(0.142)		0.031		0.003
202	16.83	0.10	0.035	(0.141)		0.031		0.003
203	16.92	0.10	0.035	(0.140)		0.031		0.003
204	17.00	0.10	0.035	(0.139)		0.031		0.003
205	17.08	0.17	0.058	(0.139)		0.052		0.006
206	17.17	0.17	0.058	(0.138)		0.052		0.006
207	17.25	0.17	0.058	(0.137)		0.052		0.006
208	17.33	0.17	0.058	(0.137)		0.052		0.006
209	17.42	0.17	0.058	(0.136)		0.052		0.006

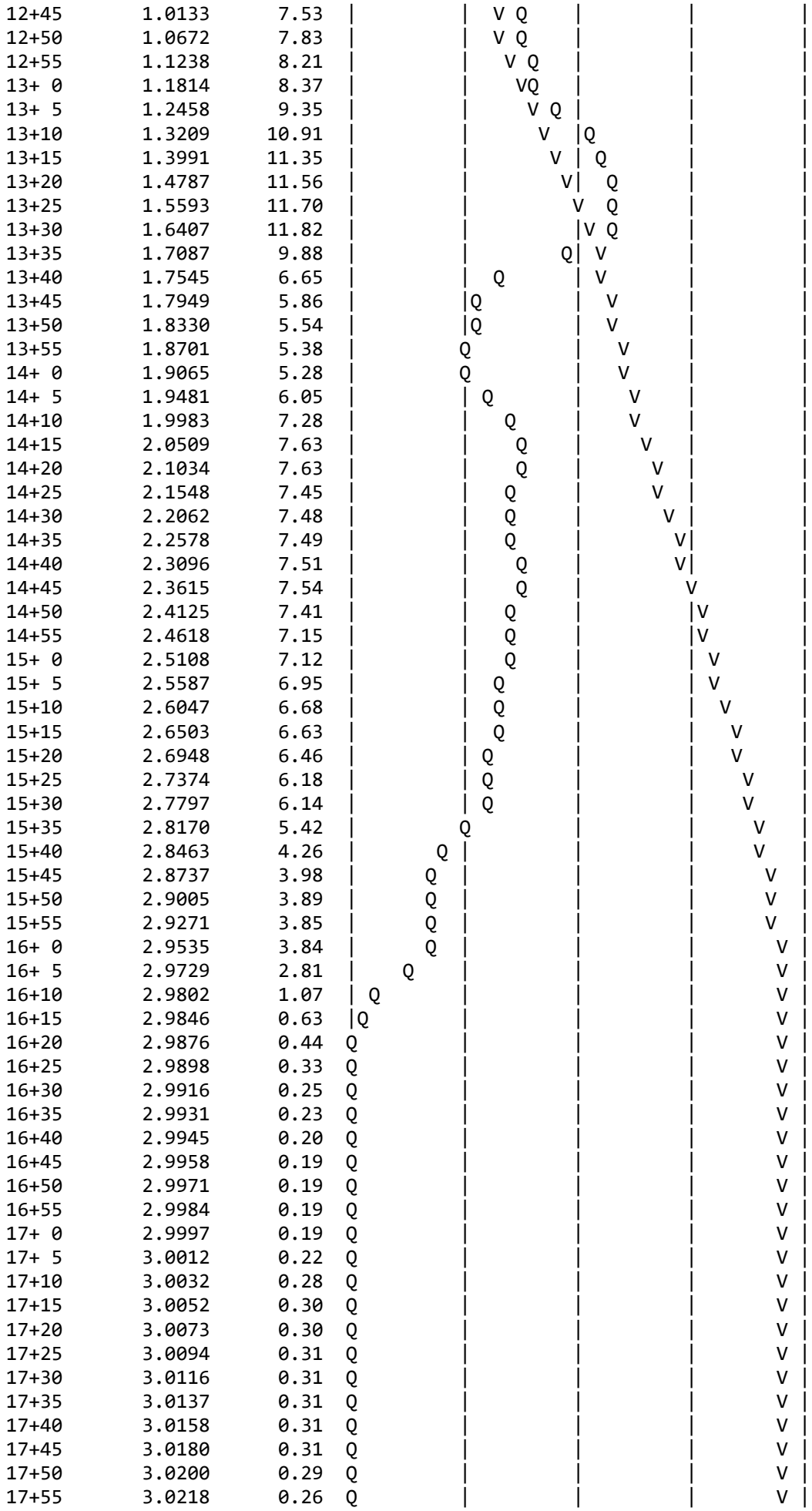
210	17.50	0.17	0.058	(0.135)	0.052	0.006
211	17.58	0.17	0.058	(0.135)	0.052	0.006
212	17.67	0.17	0.058	(0.134)	0.052	0.006
213	17.75	0.17	0.058	(0.133)	0.052	0.006
214	17.83	0.13	0.047	(0.133)	0.042	0.005
215	17.92	0.13	0.047	(0.132)	0.042	0.005
216	18.00	0.13	0.047	(0.131)	0.042	0.005
217	18.08	0.13	0.047	(0.131)	0.042	0.005
218	18.17	0.13	0.047	(0.130)	0.042	0.005
219	18.25	0.13	0.047	(0.129)	0.042	0.005
220	18.33	0.13	0.047	(0.129)	0.042	0.005
221	18.42	0.13	0.047	(0.128)	0.042	0.005
222	18.50	0.13	0.047	(0.127)	0.042	0.005
223	18.58	0.10	0.035	(0.127)	0.031	0.003
224	18.67	0.10	0.035	(0.126)	0.031	0.003
225	18.75	0.10	0.035	(0.126)	0.031	0.003
226	18.83	0.07	0.023	(0.125)	0.021	0.002
227	18.92	0.07	0.023	(0.124)	0.021	0.002
228	19.00	0.07	0.023	(0.124)	0.021	0.002
229	19.08	0.10	0.035	(0.123)	0.031	0.003
230	19.17	0.10	0.035	(0.123)	0.031	0.003
231	19.25	0.10	0.035	(0.122)	0.031	0.003
232	19.33	0.13	0.047	(0.122)	0.042	0.005
233	19.42	0.13	0.047	(0.121)	0.042	0.005
234	19.50	0.13	0.047	(0.120)	0.042	0.005
235	19.58	0.10	0.035	(0.120)	0.031	0.003
236	19.67	0.10	0.035	(0.119)	0.031	0.003
237	19.75	0.10	0.035	(0.119)	0.031	0.003
238	19.83	0.07	0.023	(0.118)	0.021	0.002
239	19.92	0.07	0.023	(0.118)	0.021	0.002
240	20.00	0.07	0.023	(0.117)	0.021	0.002
241	20.08	0.10	0.035	(0.117)	0.031	0.003
242	20.17	0.10	0.035	(0.116)	0.031	0.003
243	20.25	0.10	0.035	(0.116)	0.031	0.003
244	20.33	0.10	0.035	(0.115)	0.031	0.003
245	20.42	0.10	0.035	(0.115)	0.031	0.003
246	20.50	0.10	0.035	(0.114)	0.031	0.003
247	20.58	0.10	0.035	(0.114)	0.031	0.003
248	20.67	0.10	0.035	(0.113)	0.031	0.003
249	20.75	0.10	0.035	(0.113)	0.031	0.003
250	20.83	0.07	0.023	(0.112)	0.021	0.002
251	20.92	0.07	0.023	(0.112)	0.021	0.002
252	21.00	0.07	0.023	(0.111)	0.021	0.002
253	21.08	0.10	0.035	(0.111)	0.031	0.003
254	21.17	0.10	0.035	(0.111)	0.031	0.003
255	21.25	0.10	0.035	(0.110)	0.031	0.003
256	21.33	0.07	0.023	(0.110)	0.021	0.002
257	21.42	0.07	0.023	(0.109)	0.021	0.002
258	21.50	0.07	0.023	(0.109)	0.021	0.002
259	21.58	0.10	0.035	(0.108)	0.031	0.003
260	21.67	0.10	0.035	(0.108)	0.031	0.003
261	21.75	0.10	0.035	(0.108)	0.031	0.003
262	21.83	0.07	0.023	(0.107)	0.021	0.002
263	21.92	0.07	0.023	(0.107)	0.021	0.002
264	22.00	0.07	0.023	(0.107)	0.021	0.002
265	22.08	0.10	0.035	(0.106)	0.031	0.003
266	22.17	0.10	0.035	(0.106)	0.031	0.003
267	22.25	0.10	0.035	(0.106)	0.031	0.003
268	22.33	0.07	0.023	(0.105)	0.021	0.002
269	22.42	0.07	0.023	(0.105)	0.021	0.002
270	22.50	0.07	0.023	(0.105)	0.021	0.002
271	22.58	0.07	0.023	(0.104)	0.021	0.002
272	22.67	0.07	0.023	(0.104)	0.021	0.002

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273  22.75     0.07      0.023       (  0.104)       0.021        0.002
274  22.83     0.07      0.023       (  0.103)       0.021        0.002
275  22.92     0.07      0.023       (  0.103)       0.021        0.002
276  23.00     0.07      0.023       (  0.103)       0.021        0.002
277  23.08     0.07      0.023       (  0.103)       0.021        0.002
278  23.17     0.07      0.023       (  0.102)       0.021        0.002
279  23.25     0.07      0.023       (  0.102)       0.021        0.002
280  23.33     0.07      0.023       (  0.102)       0.021        0.002
281  23.42     0.07      0.023       (  0.102)       0.021        0.002
282  23.50     0.07      0.023       (  0.102)       0.021        0.002
283  23.58     0.07      0.023       (  0.101)       0.021        0.002
284  23.67     0.07      0.023       (  0.101)       0.021        0.002
285  23.75     0.07      0.023       (  0.101)       0.021        0.002
286  23.83     0.07      0.023       (  0.101)       0.021        0.002
287  23.92     0.07      0.023       (  0.101)       0.021        0.002
288  24.00     0.07      0.023       (  0.101)       0.021        0.002
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     8.5
       Flood volume = Effective rainfall      0.71(In)
        times area      52.8(Ac.)/[(In)/(Ft.)] =       3.1(Ac.Ft)
       Total soil loss =      2.20(In)
       Total soil loss =     9.700(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =      135304.1 Cubic Feet
       Total soil loss =      422534.3 Cubic Feet
       ------------------------------------------------------------------
        Peak flow rate of this hydrograph =     11.818(CFS)
       ------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0      20.0
 ------------------------------------------------------------------------
   0+ 5       0.0002      0.04  Q         |         |         |         |
   0+10       0.0009      0.10  Q         |         |         |         |
   0+15       0.0017      0.11  Q         |         |         |         |
   0+20       0.0026      0.14  Q         |         |         |         |
   0+25       0.0038      0.17  Q         |         |         |         |
   0+30       0.0050      0.18  Q         |         |         |         |
   0+35       0.0063      0.18  Q         |         |         |         |
   0+40       0.0075      0.18  Q         |         |         |         |
   0+45       0.0088      0.19  Q         |         |         |         |
   0+50       0.0102      0.20  Q         |         |         |         |
   0+55       0.0118      0.23  Q         |         |         |         |
   1+ 0       0.0135      0.24  Q         |         |         |         |
   1+ 5       0.0151      0.23  Q         |         |         |         |
   1+10       0.0164      0.20  Q         |         |         |         |
   1+15       0.0177      0.19  Q         |         |         |         |
   1+20       0.0190      0.19  Q         |         |         |         |
   1+25       0.0203      0.19  Q         |         |         |         |
   1+30       0.0216      0.19  Q         |         |         |         |
   1+35       0.0229      0.19  Q         |         |         |         |
   1+40       0.0242      0.19  Q         |         |         |         |
   1+45       0.0255      0.19  Q         |         |         |         |
   1+50       0.0269      0.20  Q         |         |         |         |
   1+55       0.0285      0.23  Q         |         |         |         |
   2+ 0       0.0301      0.24  Q         |         |         |         |
   2+ 5       0.0318      0.24  Q         |         |         |         |
   2+10       0.0335      0.25  Q         |         |         |         |
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2+15	0.0352	0.25	Q	|	|	|	|
2+20	0.0369	0.25	Q	|	|	|	|
2+25	0.0386	0.25	Q	|	|	|	|
2+30	0.0404	0.25	Q	|	|	|	|
2+35	0.0422	0.27	Q	|	|	|	|
2+40	0.0442	0.30	Q	|	|	|	|
2+45	0.0463	0.30	Q	|	|	|	|
2+50	0.0484	0.31	Q	|	|	|	|
2+55	0.0505	0.31	Q	|	|	|	|
3+ 0	0.0527	0.31	Q	|	|	|	|
3+ 5	0.0548	0.31	Q	|	|	|	|
3+10	0.0570	0.31	Q	|	|	|	|
3+15	0.0591	0.31	Q	|	|	|	|
3+20	0.0612	0.31	Q	|	|	|	|
3+25	0.0634	0.31	Q	|	|	|	|
3+30	0.0655	0.31	Q	|	|	|	|
3+35	0.0676	0.31	Q	|	|	|	|
3+40	0.0698	0.31	Q	|	|	|	|
3+45	0.0719	0.31	Q	|	|	|	|
3+50	0.0742	0.33	Q	|	|	|	|
3+55	0.0766	0.36	Q	|	|	|	|
4+ 0	0.0791	0.37	QV	|	|	|	|
4+ 5	0.0817	0.37	QV	|	|	|	|
4+10	0.0842	0.37	QV	|	|	|	|
4+15	0.0868	0.37	QV	|	|	|	|
4+20	0.0895	0.39	QV	|	|	|	|
4+25	0.0924	0.42	QV	|	|	|	|
4+30	0.0953	0.43	QV	|	|	|	|
4+35	0.0983	0.43	QV	|	|	|	|
4+40	0.1012	0.43	QV	|	|	|	|
4+45	0.1042	0.43	QV	|	|	|	|
4+50	0.1073	0.45	QV	|	|	|	|
4+55	0.1107	0.48	QV	|	|	|	|
5+ 0	0.1140	0.49	QV	|	|	|	|
5+ 5	0.1172	0.46	QV	|	|	|	|
5+10	0.1199	0.40	QV	|	|	|	|
5+15	0.1226	0.39	QV	|	|	|	|
5+20	0.1253	0.40	QV	|	|	|	|
5+25	0.1282	0.42	QV	|	|	|	|
5+30	0.1312	0.43	QV	|	|	|	|
5+35	0.1342	0.45	QV	|	|	|	|
5+40	0.1376	0.48	QV	|	|	|	|
5+45	0.1409	0.49	QV	|	|	|	|
5+50	0.1443	0.49	QV	|	|	|	|
5+55	0.1477	0.49	QV	|	|	|	|
6+ 0	0.1511	0.50	QV	|	|	|	|
6+ 5	0.1547	0.51	|Q	|	|	|	|
6+10	0.1584	0.54	|QV	|	|	|	|
6+15	0.1622	0.55	|QV	|	|	|	|
6+20	0.1660	0.55	|QV	|	|	|	|
6+25	0.1699	0.56	|QV	|	|	|	|
6+30	0.1737	0.56	|QV	|	|	|	|
6+35	0.1777	0.58	|QV	|	|	|	|
6+40	0.1819	0.61	|QV	|	|	|	|
6+45	0.1861	0.61	|QV	|	|	|	|
6+50	0.1903	0.62	|QV	|	|	|	|
6+55	0.1946	0.62	|QV	|	|	|	|
7+ 0	0.1989	0.62	|QV	|	|	|	|
7+ 5	0.2031	0.62	|QV	|	|	|	|
7+10	0.2074	0.62	|QV	|	|	|	|
7+15	0.2117	0.62	|QV	|	|	|	|
7+20	0.2160	0.64	|QV	|	|	|	|
7+25	0.2206	0.67	|QV	|	|	|	|

7+30	0.2253	0.68	QV			
7+35	0.2301	0.70	QV			
7+40	0.2351	0.73	Q V			
7+45	0.2402	0.74	Q V			
7+50	0.2454	0.76	Q V			
7+55	0.2509	0.79	Q V			
8+ 0	0.2564	0.80	Q V			
8+ 5	0.2621	0.84	Q V			
8+10	0.2683	0.90	Q V			
8+15	0.2746	0.92	Q V			
8+20	0.2810	0.92	Q V			
8+25	0.2874	0.93	Q V			
8+30	0.2938	0.93	Q V			
8+35	0.3003	0.95	Q V			
8+40	0.3071	0.98	Q V			
8+45	0.3138	0.99	Q V			
8+50	0.3208	1.01	Q V			
8+55	0.3279	1.04	Q V			
9+ 0	0.3351	1.05	Q V			
9+ 5	0.3426	1.09	Q V			
9+10	0.3505	1.15	Q V			
9+15	0.3585	1.16	Q V			
9+20	0.3667	1.19	Q V			
9+25	0.3752	1.22	Q V			
9+30	0.3836	1.23	Q V			
9+35	0.3925	1.28	Q V			
9+40	0.4019	1.37	Q V			
9+45	0.4118	1.44	Q V			
9+50	0.4233	1.67	Q V			
9+55	0.4373	2.03	QV			
10+ 0	0.4522	2.16	QV			
10+ 5	0.4649	1.84	Q V			
10+10	0.4732	1.22	Q V			
10+15	0.4806	1.07	Q V			
10+20	0.4875	1.00	Q V			
10+25	0.4941	0.96	Q V			
10+30	0.5005	0.93	Q V			
10+35	0.5079	1.08	Q V			
10+40	0.5171	1.33	Q V			
10+45	0.5270	1.43	Q V			
10+50	0.5373	1.51	Q V			
10+55	0.5482	1.57	Q V			
11+ 0	0.5595	1.64	Q V			
11+ 5	0.5700	1.52	Q V			
11+10	0.5788	1.29	Q V			
11+15	0.5874	1.25	Q V			
11+20	0.5961	1.26	Q V			
11+25	0.6050	1.29	Q V			
11+30	0.6142	1.33	Q V			
11+35	0.6230	1.27	Q V			
11+40	0.6307	1.12	Q V			
11+45	0.6381	1.09	Q V			
11+50	0.6456	1.09	Q V			
11+55	0.6533	1.11	Q V			
12+ 0	0.6609	1.11	Q V			
12+ 5	0.6773	2.38	Q V			
12+10	0.7082	4.49	QV			
12+15	0.7430	5.06	VQ			
12+20	0.7810	5.52	VQ			
12+25	0.8223	5.99	VQ			
12+30	0.8651	6.21	VQ			
12+35	0.9109	6.66	V Q			
12+40	0.9614	7.32	V Q			



12+45	1.0133	7.53	|	V Q	|	|	|
12+50	1.0672	7.83	|	V Q	|	|	|
12+55	1.1238	8.21	|	V Q	|	|	|
13+ 0	1.1814	8.37	|	VQ	|	|	|
13+ 5	1.2458	9.35	|	V Q	|	|	|
13+10	1.3209	10.91	|	V	Q |	|	|
13+15	1.3991	11.35	|	V	Q |	|	|
13+20	1.4787	11.56	|	V	Q |	|	|
13+25	1.5593	11.70	|	V	Q |	|	|
13+30	1.6407	11.82	|	V	Q |	|	|
13+35	1.7087	9.88	|	Q	V |	|	|
13+40	1.7545	6.65	|	Q	V |	|	|
13+45	1.7949	5.86	|	Q	V |	|	|
13+50	1.8330	5.54	|	Q	V |	|	|
13+55	1.8701	5.38	|	Q	V |	|	|
14+ 0	1.9065	5.28	|	Q	V |	|	|
14+ 5	1.9481	6.05	|	Q	V |	|	|
14+10	1.9983	7.28	|	Q	V |	|	|
14+15	2.0509	7.63	|	Q	V |	|	|
14+20	2.1034	7.63	|	Q	V |	|	|
14+25	2.1548	7.45	|	Q	V |	|	|
14+30	2.2062	7.48	|	Q	V |	|	|
14+35	2.2578	7.49	|	Q	V |	|	|
14+40	2.3096	7.51	|	Q	V |	|	|
14+45	2.3615	7.54	|	Q	V |	|	|
14+50	2.4125	7.41	|	Q	V |	|	|
14+55	2.4618	7.15	|	Q	V |	|	|
15+ 0	2.5108	7.12	|	Q	V |	|	|
15+ 5	2.5587	6.95	|	Q	V |	|	|
15+10	2.6047	6.68	|	Q	V |	|	|
15+15	2.6503	6.63	|	Q	V |	|	|
15+20	2.6948	6.46	|	Q	V |	|	|
15+25	2.7374	6.18	|	Q	V |	|	|
15+30	2.7797	6.14	|	Q	V |	|	|
15+35	2.8170	5.42	|	Q	V |	|	|
15+40	2.8463	4.26	|	Q	V |	|	|
15+45	2.8737	3.98	|	Q	V |	|	|
15+50	2.9005	3.89	|	Q	V |	|	|
15+55	2.9271	3.85	|	Q	V |	|	|
16+ 0	2.9535	3.84	|	Q	V |	|	|
16+ 5	2.9729	2.81	|	Q	V |	|	|
16+10	2.9802	1.07	|	Q	V |	|	|
16+15	2.9846	0.63	|	Q	V |	|	|
16+20	2.9876	0.44	|	Q	V |	|	|
16+25	2.9898	0.33	|	Q	V |	|	|
16+30	2.9916	0.25	|	Q	V |	|	|
16+35	2.9931	0.23	|	Q	V |	|	|
16+40	2.9945	0.20	|	Q	V |	|	|
16+45	2.9958	0.19	|	Q	V |	|	|
16+50	2.9971	0.19	|	Q	V |	|	|
16+55	2.9984	0.19	|	Q	V |	|	|
17+ 0	2.9997	0.19	|	Q	V |	|	|
17+ 5	3.0012	0.22	|	Q	V |	|	|
17+10	3.0032	0.28	|	Q	V |	|	|
17+15	3.0052	0.30	|	Q	V |	|	|
17+20	3.0073	0.30	|	Q	V |	|	|
17+25	3.0094	0.31	|	Q	V |	|	|
17+30	3.0116	0.31	|	Q	V |	|	|
17+35	3.0137	0.31	|	Q	V |	|	|
17+40	3.0158	0.31	|	Q	V |	|	|
17+45	3.0180	0.31	|	Q	V |	|	|
17+50	3.0200	0.29	|	Q	V |	|	|
17+55	3.0218	0.26	|	Q	V |	|	|

18+ 0	3.0235	0.25	Q	|	|	|	V |
18+ 5	3.0253	0.25	Q	|	|	|	V |
18+10	3.0270	0.25	Q	|	|	|	V |
18+15	3.0287	0.25	Q	|	|	|	V|
18+20	3.0304	0.25	Q	|	|	|	V|
18+25	3.0321	0.25	Q	|	|	|	V|
18+30	3.0338	0.25	Q	|	|	|	V|
18+35	3.0354	0.23	Q	|	|	|	V|
18+40	3.0368	0.20	Q	|	|	|	V|
18+45	3.0381	0.19	Q	|	|	|	V|
18+50	3.0393	0.17	Q	|	|	|	V|
18+55	3.0402	0.14	Q	|	|	|	V|
19+ 0	3.0411	0.13	Q	|	|	|	V|
19+ 5	3.0421	0.15	Q	|	|	|	V|
19+10	3.0433	0.17	Q	|	|	|	V|
19+15	3.0446	0.18	Q	|	|	|	V|
19+20	3.0459	0.20	Q	|	|	|	V|
19+25	3.0475	0.23	Q	|	|	|	V|
19+30	3.0492	0.24	Q	|	|	|	V|
19+35	3.0508	0.23	Q	|	|	|	V|
19+40	3.0521	0.20	Q	|	|	|	V|
19+45	3.0535	0.19	Q	|	|	|	V|
19+50	3.0546	0.17	Q	|	|	|	V|
19+55	3.0556	0.14	Q	|	|	|	V|
20+ 0	3.0565	0.13	Q	|	|	|	V|
20+ 5	3.0575	0.15	Q	|	|	|	V|
20+10	3.0587	0.17	Q	|	|	|	V|
20+15	3.0599	0.18	Q	|	|	|	V|
20+20	3.0612	0.18	Q	|	|	|	V|
20+25	3.0625	0.18	Q	|	|	|	V|
20+30	3.0637	0.19	Q	|	|	|	V|
20+35	3.0650	0.19	Q	|	|	|	V|
20+40	3.0663	0.19	Q	|	|	|	V|
20+45	3.0676	0.19	Q	|	|	|	V|
20+50	3.0687	0.17	Q	|	|	|	V|
20+55	3.0697	0.14	Q	|	|	|	V|
21+ 0	3.0706	0.13	Q	|	|	|	V|
21+ 5	3.0716	0.15	Q	|	|	|	V|
21+10	3.0728	0.17	Q	|	|	|	V|
21+15	3.0740	0.18	Q	|	|	|	V|
21+20	3.0752	0.16	Q	|	|	|	V|
21+25	3.0761	0.14	Q	|	|	|	V|
21+30	3.0770	0.13	Q	|	|	|	V|
21+35	3.0780	0.15	Q	|	|	|	V|
21+40	3.0792	0.17	Q	|	|	|	V|
21+45	3.0804	0.18	Q	|	|	|	V|
21+50	3.0816	0.16	Q	|	|	|	V|
21+55	3.0825	0.14	Q	|	|	|	V|
22+ 0	3.0834	0.13	Q	|	|	|	V|
22+ 5	3.0844	0.15	Q	|	|	|	V|
22+10	3.0856	0.17	Q	|	|	|	V|
22+15	3.0868	0.18	Q	|	|	|	V|
22+20	3.0880	0.16	Q	|	|	|	V|
22+25	3.0889	0.14	Q	|	|	|	V|
22+30	3.0898	0.13	Q	|	|	|	V|
22+35	3.0907	0.13	Q	|	|	|	V|
22+40	3.0915	0.13	Q	|	|	|	V|
22+45	3.0924	0.12	Q	|	|	|	V|
22+50	3.0932	0.12	Q	|	|	|	V|
22+55	3.0941	0.12	Q	|	|	|	V|
23+ 0	3.0950	0.12	Q	|	|	|	V|
23+ 5	3.0958	0.12	Q	|	|	|	V|
23+10	3.0967	0.12	Q	|	|	|	V|

23+15	3.0975	0.12	Q	|	|	|	V|
23+20	3.0984	0.12	Q	|	|	|	V|
23+25	3.0992	0.12	Q	|	|	|	V|
23+30	3.1001	0.12	Q	|	|	|	V|
23+35	3.1009	0.12	Q	|	|	|	V|
23+40	3.1018	0.12	Q	|	|	|	V|
23+45	3.1026	0.12	Q	|	|	|	V|
23+50	3.1035	0.12	Q	|	|	|	V|
23+55	3.1043	0.12	Q	|	|	|	V|
24+ 0	3.1052	0.12	Q	|	|	|	V|
24+ 5	3.1058	0.09	Q	|	|	|	V|
24+10	3.1060	0.03	Q	|	|	|	V|
24+15	3.1061	0.01	Q	|	|	|	V|
24+20	3.1061	0.01	Q	|	|	|	V|
24+25	3.1062	0.00	Q	|	|	|	V|

C.7 - Area "D"

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

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Study date 07/10/25 File: tcpd242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
OFFSITE AREA "D" PROPOSED CONDITION
2-YEAR
24-HOUR

Drainage Area = 12.66(Ac.) = 0.020 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 12.66(Ac.) = 0.020 Sq. Mi.
Length along longest watercourse = 1947.00(Ft.)
Length along longest watercourse measured to centroid = 974.00(Ft.)
Length along longest watercourse = 0.369 Mi.
Length along longest watercourse measured to centroid = 0.184 Mi.
Difference in elevation = 388.00(Ft.)
Slope along watercourse = 1052.2034 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.069 Hr.
Lag time = 4.15 Min.
25% of lag time = 1.04 Min.
40% of lag time = 1.66 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
12.66	1.80	22.79

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
12.66	4.50	56.97

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
12.660	89.00	0.000

Total Area Entered = 12.66(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
89.0	76.4	0.286	0.000	0.286	1.000	0.286
					Sum (F) =	0.286

Area averaged mean soil loss (F) (In/Hr) = 0.286
Minimum soil loss rate ((In/Hr)) = 0.143
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	120.580	25.367	3.237
2	0.167	241.160	48.701	6.214
3	0.250	361.740	13.258	1.692
4	0.333	482.320	5.998	0.765
5	0.417	602.900	3.357	0.428
6	0.500	723.480	1.915	0.244
7	0.583	844.060	1.405	0.179
			Sum = 100.000	Sum= 12.759

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.508)	0.013	0.001
2	0.17	0.07	0.014	(0.506)	0.013	0.001
3	0.25	0.07	0.014	(0.504)	0.013	0.001
4	0.33	0.10	0.022	(0.502)	0.019	0.002
5	0.42	0.10	0.022	(0.500)	0.019	0.002
6	0.50	0.10	0.022	(0.498)	0.019	0.002
7	0.58	0.10	0.022	(0.496)	0.019	0.002
8	0.67	0.10	0.022	(0.494)	0.019	0.002
9	0.75	0.10	0.022	(0.492)	0.019	0.002
10	0.83	0.13	0.029	(0.490)	0.026	0.003
11	0.92	0.13	0.029	(0.488)	0.026	0.003
12	1.00	0.13	0.029	(0.486)	0.026	0.003
13	1.08	0.10	0.022	(0.485)	0.019	0.002
14	1.17	0.10	0.022	(0.483)	0.019	0.002
15	1.25	0.10	0.022	(0.481)	0.019	0.002
16	1.33	0.10	0.022	(0.479)	0.019	0.002
17	1.42	0.10	0.022	(0.477)	0.019	0.002
18	1.50	0.10	0.022	(0.475)	0.019	0.002
19	1.58	0.10	0.022	(0.473)	0.019	0.002

20	1.67	0.10	0.022	(0.471)	0.019	0.002
21	1.75	0.10	0.022	(0.469)	0.019	0.002
22	1.83	0.13	0.029	(0.467)	0.026	0.003
23	1.92	0.13	0.029	(0.466)	0.026	0.003
24	2.00	0.13	0.029	(0.464)	0.026	0.003
25	2.08	0.13	0.029	(0.462)	0.026	0.003
26	2.17	0.13	0.029	(0.460)	0.026	0.003
27	2.25	0.13	0.029	(0.458)	0.026	0.003
28	2.33	0.13	0.029	(0.456)	0.026	0.003
29	2.42	0.13	0.029	(0.454)	0.026	0.003
30	2.50	0.13	0.029	(0.452)	0.026	0.003
31	2.58	0.17	0.036	(0.451)	0.032	0.004
32	2.67	0.17	0.036	(0.449)	0.032	0.004
33	2.75	0.17	0.036	(0.447)	0.032	0.004
34	2.83	0.17	0.036	(0.445)	0.032	0.004
35	2.92	0.17	0.036	(0.443)	0.032	0.004
36	3.00	0.17	0.036	(0.441)	0.032	0.004
37	3.08	0.17	0.036	(0.440)	0.032	0.004
38	3.17	0.17	0.036	(0.438)	0.032	0.004
39	3.25	0.17	0.036	(0.436)	0.032	0.004
40	3.33	0.17	0.036	(0.434)	0.032	0.004
41	3.42	0.17	0.036	(0.432)	0.032	0.004
42	3.50	0.17	0.036	(0.430)	0.032	0.004
43	3.58	0.17	0.036	(0.429)	0.032	0.004
44	3.67	0.17	0.036	(0.427)	0.032	0.004
45	3.75	0.17	0.036	(0.425)	0.032	0.004
46	3.83	0.20	0.043	(0.423)	0.039	0.004
47	3.92	0.20	0.043	(0.422)	0.039	0.004
48	4.00	0.20	0.043	(0.420)	0.039	0.004
49	4.08	0.20	0.043	(0.418)	0.039	0.004
50	4.17	0.20	0.043	(0.416)	0.039	0.004
51	4.25	0.20	0.043	(0.414)	0.039	0.004
52	4.33	0.23	0.050	(0.413)	0.045	0.005
53	4.42	0.23	0.050	(0.411)	0.045	0.005
54	4.50	0.23	0.050	(0.409)	0.045	0.005
55	4.58	0.23	0.050	(0.407)	0.045	0.005
56	4.67	0.23	0.050	(0.406)	0.045	0.005
57	4.75	0.23	0.050	(0.404)	0.045	0.005
58	4.83	0.27	0.058	(0.402)	0.052	0.006
59	4.92	0.27	0.058	(0.400)	0.052	0.006
60	5.00	0.27	0.058	(0.399)	0.052	0.006
61	5.08	0.20	0.043	(0.397)	0.039	0.004
62	5.17	0.20	0.043	(0.395)	0.039	0.004
63	5.25	0.20	0.043	(0.393)	0.039	0.004
64	5.33	0.23	0.050	(0.392)	0.045	0.005
65	5.42	0.23	0.050	(0.390)	0.045	0.005
66	5.50	0.23	0.050	(0.388)	0.045	0.005
67	5.58	0.27	0.058	(0.387)	0.052	0.006
68	5.67	0.27	0.058	(0.385)	0.052	0.006
69	5.75	0.27	0.058	(0.383)	0.052	0.006
70	5.83	0.27	0.058	(0.382)	0.052	0.006
71	5.92	0.27	0.058	(0.380)	0.052	0.006
72	6.00	0.27	0.058	(0.378)	0.052	0.006
73	6.08	0.30	0.065	(0.376)	0.058	0.006
74	6.17	0.30	0.065	(0.375)	0.058	0.006
75	6.25	0.30	0.065	(0.373)	0.058	0.006
76	6.33	0.30	0.065	(0.371)	0.058	0.006
77	6.42	0.30	0.065	(0.370)	0.058	0.006
78	6.50	0.30	0.065	(0.368)	0.058	0.006
79	6.58	0.33	0.072	(0.366)	0.065	0.007
80	6.67	0.33	0.072	(0.365)	0.065	0.007
81	6.75	0.33	0.072	(0.363)	0.065	0.007
82	6.83	0.33	0.072	(0.362)	0.065	0.007

83	6.92	0.33	0.072	(0.360)	0.065	0.007
84	7.00	0.33	0.072	(0.358)	0.065	0.007
85	7.08	0.33	0.072	(0.357)	0.065	0.007
86	7.17	0.33	0.072	(0.355)	0.065	0.007
87	7.25	0.33	0.072	(0.353)	0.065	0.007
88	7.33	0.37	0.079	(0.352)	0.071	0.008
89	7.42	0.37	0.079	(0.350)	0.071	0.008
90	7.50	0.37	0.079	(0.349)	0.071	0.008
91	7.58	0.40	0.086	(0.347)	0.078	0.009
92	7.67	0.40	0.086	(0.345)	0.078	0.009
93	7.75	0.40	0.086	(0.344)	0.078	0.009
94	7.83	0.43	0.094	(0.342)	0.084	0.009
95	7.92	0.43	0.094	(0.341)	0.084	0.009
96	8.00	0.43	0.094	(0.339)	0.084	0.009
97	8.08	0.50	0.108	(0.337)	0.097	0.011
98	8.17	0.50	0.108	(0.336)	0.097	0.011
99	8.25	0.50	0.108	(0.334)	0.097	0.011
100	8.33	0.50	0.108	(0.333)	0.097	0.011
101	8.42	0.50	0.108	(0.331)	0.097	0.011
102	8.50	0.50	0.108	(0.330)	0.097	0.011
103	8.58	0.53	0.115	(0.328)	0.104	0.012
104	8.67	0.53	0.115	(0.327)	0.104	0.012
105	8.75	0.53	0.115	(0.325)	0.104	0.012
106	8.83	0.57	0.122	(0.323)	0.110	0.012
107	8.92	0.57	0.122	(0.322)	0.110	0.012
108	9.00	0.57	0.122	(0.320)	0.110	0.012
109	9.08	0.63	0.137	(0.319)	0.123	0.014
110	9.17	0.63	0.137	(0.317)	0.123	0.014
111	9.25	0.63	0.137	(0.316)	0.123	0.014
112	9.33	0.67	0.144	(0.314)	0.130	0.014
113	9.42	0.67	0.144	(0.313)	0.130	0.014
114	9.50	0.67	0.144	(0.311)	0.130	0.014
115	9.58	0.70	0.151	(0.310)	0.136	0.015
116	9.67	0.70	0.151	(0.308)	0.136	0.015
117	9.75	0.70	0.151	(0.307)	0.136	0.015
118	9.83	0.73	0.158	(0.305)	0.143	0.016
119	9.92	0.73	0.158	(0.304)	0.143	0.016
120	10.00	0.73	0.158	(0.303)	0.143	0.016
121	10.08	0.50	0.108	(0.301)	0.097	0.011
122	10.17	0.50	0.108	(0.300)	0.097	0.011
123	10.25	0.50	0.108	(0.298)	0.097	0.011
124	10.33	0.50	0.108	(0.297)	0.097	0.011
125	10.42	0.50	0.108	(0.295)	0.097	0.011
126	10.50	0.50	0.108	(0.294)	0.097	0.011
127	10.58	0.67	0.144	(0.292)	0.130	0.014
128	10.67	0.67	0.144	(0.291)	0.130	0.014
129	10.75	0.67	0.144	(0.290)	0.130	0.014
130	10.83	0.67	0.144	(0.288)	0.130	0.014
131	10.92	0.67	0.144	(0.287)	0.130	0.014
132	11.00	0.67	0.144	(0.285)	0.130	0.014
133	11.08	0.63	0.137	(0.284)	0.123	0.014
134	11.17	0.63	0.137	(0.282)	0.123	0.014
135	11.25	0.63	0.137	(0.281)	0.123	0.014
136	11.33	0.63	0.137	(0.280)	0.123	0.014
137	11.42	0.63	0.137	(0.278)	0.123	0.014
138	11.50	0.63	0.137	(0.277)	0.123	0.014
139	11.58	0.57	0.122	(0.276)	0.110	0.012
140	11.67	0.57	0.122	(0.274)	0.110	0.012
141	11.75	0.57	0.122	(0.273)	0.110	0.012
142	11.83	0.60	0.130	(0.271)	0.117	0.013
143	11.92	0.60	0.130	(0.270)	0.117	0.013
144	12.00	0.60	0.130	(0.269)	0.117	0.013
145	12.08	0.83	0.180	(0.267)	0.162	0.018

146	12.17	0.83	0.180	(0.266)	0.162	0.018
147	12.25	0.83	0.180	(0.265)	0.162	0.018
148	12.33	0.87	0.187	(0.263)	0.168	0.019
149	12.42	0.87	0.187	(0.262)	0.168	0.019
150	12.50	0.87	0.187	(0.261)	0.168	0.019
151	12.58	0.93	0.202	(0.259)	0.181	0.020
152	12.67	0.93	0.202	(0.258)	0.181	0.020
153	12.75	0.93	0.202	(0.257)	0.181	0.020
154	12.83	0.97	0.209	(0.256)	0.188	0.021
155	12.92	0.97	0.209	(0.254)	0.188	0.021
156	13.00	0.97	0.209	(0.253)	0.188	0.021
157	13.08	1.13	0.245	(0.252)	0.220	0.024
158	13.17	1.13	0.245	(0.250)	0.220	0.024
159	13.25	1.13	0.245	(0.249)	0.220	0.024
160	13.33	1.13	0.245	(0.248)	0.220	0.024
161	13.42	1.13	0.245	(0.247)	0.220	0.024
162	13.50	1.13	0.245	(0.245)	0.220	0.024
163	13.58	0.77	0.166	(0.244)	0.149	0.017
164	13.67	0.77	0.166	(0.243)	0.149	0.017
165	13.75	0.77	0.166	(0.242)	0.149	0.017
166	13.83	0.77	0.166	(0.240)	0.149	0.017
167	13.92	0.77	0.166	(0.239)	0.149	0.017
168	14.00	0.77	0.166	(0.238)	0.149	0.017
169	14.08	0.90	0.194	(0.237)	0.175	0.019
170	14.17	0.90	0.194	(0.236)	0.175	0.019
171	14.25	0.90	0.194	(0.234)	0.175	0.019
172	14.33	0.87	0.187	(0.233)	0.168	0.019
173	14.42	0.87	0.187	(0.232)	0.168	0.019
174	14.50	0.87	0.187	(0.231)	0.168	0.019
175	14.58	0.87	0.187	(0.230)	0.168	0.019
176	14.67	0.87	0.187	(0.228)	0.168	0.019
177	14.75	0.87	0.187	(0.227)	0.168	0.019
178	14.83	0.83	0.180	(0.226)	0.162	0.018
179	14.92	0.83	0.180	(0.225)	0.162	0.018
180	15.00	0.83	0.180	(0.224)	0.162	0.018
181	15.08	0.80	0.173	(0.223)	0.156	0.017
182	15.17	0.80	0.173	(0.221)	0.156	0.017
183	15.25	0.80	0.173	(0.220)	0.156	0.017
184	15.33	0.77	0.166	(0.219)	0.149	0.017
185	15.42	0.77	0.166	(0.218)	0.149	0.017
186	15.50	0.77	0.166	(0.217)	0.149	0.017
187	15.58	0.63	0.137	(0.216)	0.123	0.014
188	15.67	0.63	0.137	(0.215)	0.123	0.014
189	15.75	0.63	0.137	(0.214)	0.123	0.014
190	15.83	0.63	0.137	(0.213)	0.123	0.014
191	15.92	0.63	0.137	(0.211)	0.123	0.014
192	16.00	0.63	0.137	(0.210)	0.123	0.014
193	16.08	0.13	0.029	(0.209)	0.026	0.003
194	16.17	0.13	0.029	(0.208)	0.026	0.003
195	16.25	0.13	0.029	(0.207)	0.026	0.003
196	16.33	0.13	0.029	(0.206)	0.026	0.003
197	16.42	0.13	0.029	(0.205)	0.026	0.003
198	16.50	0.13	0.029	(0.204)	0.026	0.003
199	16.58	0.10	0.022	(0.203)	0.019	0.002
200	16.67	0.10	0.022	(0.202)	0.019	0.002
201	16.75	0.10	0.022	(0.201)	0.019	0.002
202	16.83	0.10	0.022	(0.200)	0.019	0.002
203	16.92	0.10	0.022	(0.199)	0.019	0.002
204	17.00	0.10	0.022	(0.198)	0.019	0.002
205	17.08	0.17	0.036	(0.197)	0.032	0.004
206	17.17	0.17	0.036	(0.196)	0.032	0.004
207	17.25	0.17	0.036	(0.195)	0.032	0.004
208	17.33	0.17	0.036	(0.194)	0.032	0.004

209	17.42	0.17	0.036	(	0.193)	0.032	0.004
210	17.50	0.17	0.036	(	0.192)	0.032	0.004
211	17.58	0.17	0.036	(	0.191)	0.032	0.004
212	17.67	0.17	0.036	(	0.190)	0.032	0.004
213	17.75	0.17	0.036	(	0.189)	0.032	0.004
214	17.83	0.13	0.029	(	0.188)	0.026	0.003
215	17.92	0.13	0.029	(	0.187)	0.026	0.003
216	18.00	0.13	0.029	(	0.186)	0.026	0.003
217	18.08	0.13	0.029	(	0.185)	0.026	0.003
218	18.17	0.13	0.029	(	0.185)	0.026	0.003
219	18.25	0.13	0.029	(	0.184)	0.026	0.003
220	18.33	0.13	0.029	(	0.183)	0.026	0.003
221	18.42	0.13	0.029	(	0.182)	0.026	0.003
222	18.50	0.13	0.029	(	0.181)	0.026	0.003
223	18.58	0.10	0.022	(	0.180)	0.019	0.002
224	18.67	0.10	0.022	(	0.179)	0.019	0.002
225	18.75	0.10	0.022	(	0.178)	0.019	0.002
226	18.83	0.07	0.014	(	0.177)	0.013	0.001
227	18.92	0.07	0.014	(	0.177)	0.013	0.001
228	19.00	0.07	0.014	(	0.176)	0.013	0.001
229	19.08	0.10	0.022	(	0.175)	0.019	0.002
230	19.17	0.10	0.022	(	0.174)	0.019	0.002
231	19.25	0.10	0.022	(	0.173)	0.019	0.002
232	19.33	0.13	0.029	(	0.173)	0.026	0.003
233	19.42	0.13	0.029	(	0.172)	0.026	0.003
234	19.50	0.13	0.029	(	0.171)	0.026	0.003
235	19.58	0.10	0.022	(	0.170)	0.019	0.002
236	19.67	0.10	0.022	(	0.169)	0.019	0.002
237	19.75	0.10	0.022	(	0.169)	0.019	0.002
238	19.83	0.07	0.014	(	0.168)	0.013	0.001
239	19.92	0.07	0.014	(	0.167)	0.013	0.001
240	20.00	0.07	0.014	(	0.166)	0.013	0.001
241	20.08	0.10	0.022	(	0.166)	0.019	0.002
242	20.17	0.10	0.022	(	0.165)	0.019	0.002
243	20.25	0.10	0.022	(	0.164)	0.019	0.002
244	20.33	0.10	0.022	(	0.163)	0.019	0.002
245	20.42	0.10	0.022	(	0.163)	0.019	0.002
246	20.50	0.10	0.022	(	0.162)	0.019	0.002
247	20.58	0.10	0.022	(	0.161)	0.019	0.002
248	20.67	0.10	0.022	(	0.161)	0.019	0.002
249	20.75	0.10	0.022	(	0.160)	0.019	0.002
250	20.83	0.07	0.014	(	0.159)	0.013	0.001
251	20.92	0.07	0.014	(	0.159)	0.013	0.001
252	21.00	0.07	0.014	(	0.158)	0.013	0.001
253	21.08	0.10	0.022	(	0.157)	0.019	0.002
254	21.17	0.10	0.022	(	0.157)	0.019	0.002
255	21.25	0.10	0.022	(	0.156)	0.019	0.002
256	21.33	0.07	0.014	(	0.156)	0.013	0.001
257	21.42	0.07	0.014	(	0.155)	0.013	0.001
258	21.50	0.07	0.014	(	0.155)	0.013	0.001
259	21.58	0.10	0.022	(	0.154)	0.019	0.002
260	21.67	0.10	0.022	(	0.153)	0.019	0.002
261	21.75	0.10	0.022	(	0.153)	0.019	0.002
262	21.83	0.07	0.014	(	0.152)	0.013	0.001
263	21.92	0.07	0.014	(	0.152)	0.013	0.001
264	22.00	0.07	0.014	(	0.151)	0.013	0.001
265	22.08	0.10	0.022	(	0.151)	0.019	0.002
266	22.17	0.10	0.022	(	0.150)	0.019	0.002
267	22.25	0.10	0.022	(	0.150)	0.019	0.002
268	22.33	0.07	0.014	(	0.149)	0.013	0.001
269	22.42	0.07	0.014	(	0.149)	0.013	0.001
270	22.50	0.07	0.014	(	0.148)	0.013	0.001
271	22.58	0.07	0.014	(	0.148)	0.013	0.001

```
272  22.67     0.07      0.014       (  0.148)       0.013        0.001
273  22.75     0.07      0.014       (  0.147)       0.013        0.001
274  22.83     0.07      0.014       (  0.147)       0.013        0.001
275  22.92     0.07      0.014       (  0.146)       0.013        0.001
276  23.00     0.07      0.014       (  0.146)       0.013        0.001
277  23.08     0.07      0.014       (  0.146)       0.013        0.001
278  23.17     0.07      0.014       (  0.145)       0.013        0.001
279  23.25     0.07      0.014       (  0.145)       0.013        0.001
280  23.33     0.07      0.014       (  0.145)       0.013        0.001
281  23.42     0.07      0.014       (  0.145)       0.013        0.001
282  23.50     0.07      0.014       (  0.144)       0.013        0.001
283  23.58     0.07      0.014       (  0.144)       0.013        0.001
284  23.67     0.07      0.014       (  0.144)       0.013        0.001
285  23.75     0.07      0.014       (  0.144)       0.013        0.001
286  23.83     0.07      0.014       (  0.143)       0.013        0.001
287  23.92     0.07      0.014       (  0.143)       0.013        0.001
288  24.00     0.07      0.014       (  0.143)       0.013        0.001
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     2.2
       Flood volume = Effective rainfall      0.18(In)
        times area      12.7(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
       Total soil loss =      1.62(In)
       Total soil loss =     1.709(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =        8271.8 Cubic Feet
       Total soil loss =       74446.6 Cubic Feet
       ------------------------------------------------------------------------
        Peak flow rate of this hydrograph =      0.312(CFS)
       ------------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q         |         |         |         |
   0+10       0.0001      0.01  Q         |         |         |         |
   0+15       0.0002      0.02  Q         |         |         |         |
   0+20       0.0004      0.02  Q         |         |         |         |
   0+25       0.0005      0.02  Q         |         |         |         |
   0+30       0.0007      0.03  Q         |         |         |         |
   0+35       0.0009      0.03  Q         |         |         |         |
   0+40       0.0011      0.03  Q         |         |         |         |
   0+45       0.0013      0.03  Q         |         |         |         |
   0+50       0.0015      0.03  Q         |         |         |         |
   0+55       0.0017      0.03  Q         |         |         |         |
   1+ 0       0.0020      0.04  Q         |         |         |         |
   1+ 5       0.0022      0.03  Q         |         |         |         |
   1+10       0.0024      0.03  Q         |         |         |         |
   1+15       0.0026      0.03  Q         |         |         |         |
   1+20       0.0028      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       0.0036      0.03  Q         |         |         |         |
   1+45       0.0038      0.03  Q         |         |         |         |
   1+50       0.0040      0.03  Q         |         |         |         |
   1+55       0.0042      0.03  Q         |         |         |         |
   2+ 0       0.0044      0.04  Q         |         |         |         |
   2+ 5       0.0047      0.04  Q         |         |         |         |
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2+10	0.0049	0.04	QV	|	|	|	|
2+15	0.0052	0.04	QV	|	|	|	|
2+20	0.0054	0.04	QV	|	|	|	|
2+25	0.0057	0.04	QV	|	|	|	|
2+30	0.0060	0.04	QV	|	|	|	|
2+35	0.0062	0.04	QV	|	|	|	|
2+40	0.0065	0.04	QV	|	|	|	|
2+45	0.0068	0.04	QV	|	|	|	|
2+50	0.0071	0.05	QV	|	|	|	|
2+55	0.0075	0.05	QV	|	|	|	|
3+ 0	0.0078	0.05	QV	|	|	|	|
3+ 5	0.0081	0.05	QV	|	|	|	|
3+10	0.0084	0.05	QV	|	|	|	|
3+15	0.0087	0.05	QV	|	|	|	|
3+20	0.0090	0.05	QV	|	|	|	|
3+25	0.0094	0.05	QV	|	|	|	|
3+30	0.0097	0.05	Q V	|	|	|	|
3+35	0.0100	0.05	Q V	|	|	|	|
3+40	0.0103	0.05	Q V	|	|	|	|
3+45	0.0106	0.05	Q V	|	|	|	|
3+50	0.0110	0.05	Q V	|	|	|	|
3+55	0.0113	0.05	Q V	|	|	|	|
4+ 0	0.0117	0.05	Q V	|	|	|	|
4+ 5	0.0121	0.05	Q V	|	|	|	|
4+10	0.0124	0.05	Q V	|	|	|	|
4+15	0.0128	0.06	Q V	|	|	|	|
4+20	0.0132	0.06	Q V	|	|	|	|
4+25	0.0136	0.06	Q V	|	|	|	|
4+30	0.0141	0.06	Q V	|	|	|	|
4+35	0.0145	0.06	Q V	|	|	|	|
4+40	0.0150	0.06	Q V	|	|	|	|
4+45	0.0154	0.06	Q V	|	|	|	|
4+50	0.0159	0.07	Q V	|	|	|	|
4+55	0.0163	0.07	Q V	|	|	|	|
5+ 0	0.0168	0.07	Q V	|	|	|	|
5+ 5	0.0173	0.07	Q V	|	|	|	|
5+10	0.0177	0.06	Q V	|	|	|	|
5+15	0.0181	0.06	Q V	|	|	|	|
5+20	0.0185	0.06	Q V	|	|	|	|
5+25	0.0190	0.06	Q V	|	|	|	|
5+30	0.0194	0.06	Q V	|	|	|	|
5+35	0.0198	0.07	Q V	|	|	|	|
5+40	0.0203	0.07	Q V	|	|	|	|
5+45	0.0208	0.07	Q V	|	|	|	|
5+50	0.0213	0.07	Q V	|	|	|	|
5+55	0.0218	0.07	Q V	|	|	|	|
6+ 0	0.0223	0.07	Q V	|	|	|	|
6+ 5	0.0229	0.08	Q V	|	|	|	|
6+10	0.0234	0.08	Q V	|	|	|	|
6+15	0.0240	0.08	Q V	|	|	|	|
6+20	0.0245	0.08	Q V	|	|	|	|
6+25	0.0251	0.08	Q V	|	|	|	|
6+30	0.0257	0.08	Q V	|	|	|	|
6+35	0.0263	0.09	Q V	|	|	|	|
6+40	0.0269	0.09	Q V	|	|	|	|
6+45	0.0275	0.09	Q V	|	|	|	|
6+50	0.0281	0.09	Q V	|	|	|	|
6+55	0.0288	0.09	Q V	|	|	|	|
7+ 0	0.0294	0.09	Q V	|	|	|	|
7+ 5	0.0300	0.09	Q V	|	|	|	|
7+10	0.0307	0.09	Q V	|	|	|	|
7+15	0.0313	0.09	Q V	|	|	|	|
7+20	0.0320	0.09	Q V	|	|	|	|

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 7+25       0.0326      0.10  Q     V   |          |          |          |
 7+30       0.0333      0.10  Q      V  |          |          |          |
 7+35       0.0340      0.10  Q      V  |          |          |          |
 7+40       0.0348      0.11  Q      V  |          |          |          |
 7+45       0.0355      0.11  Q      V  |          |          |          |
 7+50       0.0363      0.11  Q      V  |          |          |          |
 7+55       0.0371      0.12  Q      V  |          |          |          |
 8+ 0       0.0379      0.12  Q      V  |          |          |          |
 8+ 5       0.0388      0.12  Q       V |          |          |          |
 8+10       0.0397      0.13  Q       V |          |          |          |
 8+15       0.0406      0.14  Q       V |          |          |          |
 8+20       0.0415      0.14  Q       V |          |          |          |
 8+25       0.0425      0.14  Q       V |          |          |          |
 8+30       0.0434      0.14  Q        V|          |          |          |
 8+35       0.0444      0.14  Q        V|          |          |          |
 8+40       0.0454      0.14  Q        V|          |          |          |
 8+45       0.0464      0.15  Q        V|          |          |          |
 8+50       0.0474      0.15  Q        V|          |          |          |
 8+55       0.0485      0.15  Q         V          |          |          |
 9+ 0       0.0496      0.15  Q         V          |          |          |
 9+ 5       0.0507      0.16  Q         V          |          |          |
 9+10       0.0518      0.17  Q         V          |          |          |
 9+15       0.0530      0.17  Q         |V         |          |          |
 9+20       0.0542      0.18  Q         |V         |          |          |
 9+25       0.0555      0.18  Q         |V         |          |          |
 9+30       0.0567      0.18  Q         |V         |          |          |
 9+35       0.0580      0.19  Q         | V        |          |          |
 9+40       0.0593      0.19  Q         | V        |          |          |
 9+45       0.0606      0.19  Q         | V        |          |          |
 9+50       0.0620      0.19  Q         |  V       |          |          |
 9+55       0.0634      0.20  Q         |  V       |          |          |
10+ 0       0.0647      0.20  Q         |  V       |          |          |
10+ 5       0.0660      0.19  Q         |  V       |          |          |
10+10       0.0671      0.15  Q         |   V      |          |          |
10+15       0.0681      0.15  Q         |   V      |          |          |
10+20       0.0691      0.14  Q         |   V      |          |          |
10+25       0.0700      0.14  Q         |   V      |          |          |
10+30       0.0710      0.14  Q         |   V      |          |          |
10+35       0.0720      0.15  Q         |    V     |          |          |
10+40       0.0732      0.17  Q         |    V     |          |          |
10+45       0.0744      0.18  Q         |    V     |          |          |
10+50       0.0757      0.18  Q         |    V     |          |          |
10+55       0.0769      0.18  Q         |     V    |          |          |
11+ 0       0.0782      0.18  Q         |     V    |          |          |
11+ 5       0.0794      0.18  Q         |     V    |          |          |
11+10       0.0806      0.18  Q         |     V    |          |          |
11+15       0.0819      0.18  Q         |      V   |          |          |
11+20       0.0831      0.18  Q         |      V   |          |          |
11+25       0.0843      0.17  Q         |      V   |          |          |
11+30       0.0855      0.17  Q         |       V  |          |          |
11+35       0.0866      0.17  Q         |       V  |          |          |
11+40       0.0878      0.16  Q         |       V  |          |          |
11+45       0.0888      0.16  Q         |       V  |          |          |
11+50       0.0899      0.16  Q         |       V  |          |          |
11+55       0.0911      0.16  Q         |        V |          |          |
12+ 0       0.0922      0.16  Q         |        V |          |          |
12+ 5       0.0935      0.18  Q         |        V |          |          |
12+10       0.0949      0.21  Q         |        V |          |          |
12+15       0.0964      0.22  Q         |         V          |          |
12+20       0.0980      0.23  Q         |         V          |          |
12+25       0.0996      0.23  Q         |         V          |          |
12+30       0.1013      0.24  Q         |          |V        |          |
12+35       0.1029      0.24  Q         |          |V        |          |
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12+40	0.1047	0.25	|Q	|	|	V	|	|
12+45	0.1064	0.25	|Q	|	|	V	|	|
12+50	0.1082	0.26	|Q	|	|	V	|	|
12+55	0.1100	0.26	|Q	|	|	V	|	|
13+ 0	0.1118	0.27	|Q	|	|	V	|	|
13+ 5	0.1138	0.28	|Q	|	|	V	|	|
13+10	0.1158	0.30	|Q	|	|	V	|	|
13+15	0.1179	0.31	|Q	|	|	V	|	|
13+20	0.1201	0.31	|Q	|	|	V	|	|
13+25	0.1222	0.31	|Q	|	|	V	|	|
13+30	0.1244	0.31	|Q	|	|	V	|	|
13+35	0.1263	0.29	|Q	|	|	V	|	|
13+40	0.1280	0.24	Q	|	|	V	|	|
13+45	0.1295	0.22	Q	|	|	V	|	|
13+50	0.1310	0.22	Q	|	|	V	|	|
13+55	0.1325	0.21	Q	|	|	V	|	|
14+ 0	0.1340	0.21	Q	|	|	V	|	|
14+ 5	0.1355	0.22	Q	|	|	V	|	|
14+10	0.1371	0.24	Q	|	|	V	|	|
14+15	0.1388	0.24	Q	|	|	V	|	|
14+20	0.1405	0.24	Q	|	|	V	|	|
14+25	0.1421	0.24	Q	|	|	V	|	|
14+30	0.1438	0.24	Q	|	|	V	|	|
14+35	0.1454	0.24	Q	|	|	V	|	|
14+40	0.1471	0.24	Q	|	|	V	|	|
14+45	0.1487	0.24	Q	|	|	V	|	|
14+50	0.1504	0.24	Q	|	|	V	|	|
14+55	0.1520	0.23	Q	|	|	V	|	|
15+ 0	0.1535	0.23	Q	|	|	V	|	|
15+ 5	0.1551	0.23	Q	|	|	V	|	|
15+10	0.1567	0.22	Q	|	|	V	|	|
15+15	0.1582	0.22	Q	|	|	V	|	|
15+20	0.1597	0.22	Q	|	|	V	|	|
15+25	0.1612	0.21	Q	|	|	V	|	|
15+30	0.1626	0.21	Q	|	|	V	|	|
15+35	0.1640	0.20	Q	|	|	V	|	|
15+40	0.1653	0.18	Q	|	|	V	|	|
15+45	0.1665	0.18	Q	|	|	V	|	|
15+50	0.1677	0.18	Q	|	|	V	|	|
15+55	0.1690	0.18	Q	|	|	V	|	|
16+ 0	0.1702	0.18	Q	|	|	V	|	|
16+ 5	0.1711	0.14	Q	|	|	V	|	|
16+10	0.1716	0.07	Q	|	|	V	|	|
16+15	0.1720	0.05	Q	|	|	V	|	|
16+20	0.1723	0.05	Q	|	|	V	|	|
16+25	0.1726	0.04	Q	|	|	V	|	|
16+30	0.1729	0.04	Q	|	|	V	|	|
16+35	0.1731	0.03	Q	|	|	V	|	|
16+40	0.1733	0.03	Q	|	|	V	|	|
16+45	0.1735	0.03	Q	|	|	V	|	|
16+50	0.1737	0.03	Q	|	|	V	|	|
16+55	0.1739	0.03	Q	|	|	V	|	|
17+ 0	0.1741	0.03	Q	|	|	V	|	|
17+ 5	0.1743	0.03	Q	|	|	V	|	|
17+10	0.1746	0.04	Q	|	|	V	|	|
17+15	0.1749	0.04	Q	|	|	V	|	|
17+20	0.1752	0.04	Q	|	|	V	|	|
17+25	0.1755	0.05	Q	|	|	V	|	|
17+30	0.1758	0.05	Q	|	|	V	|	|
17+35	0.1761	0.05	Q	|	|	V	|	|
17+40	0.1765	0.05	Q	|	|	V	|	|
17+45	0.1768	0.05	Q	|	|	V	|	|
17+50	0.1771	0.04	Q	|	|	V	|	|

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17+55       0.1773      0.04  Q         |          |          |      V  |
18+ 0       0.1776      0.04  Q         |          |          |      V  |
18+ 5       0.1779      0.04  Q         |          |          |      V  |
18+10       0.1781      0.04  Q         |          |          |      V  |
18+15       0.1784      0.04  Q         |          |          |      V  |
18+20       0.1786      0.04  Q         |          |          |      V  |
18+25       0.1789      0.04  Q         |          |          |      V  |
18+30       0.1791      0.04  Q         |          |          |      V  |
18+35       0.1794      0.03  Q         |          |          |      V  |
18+40       0.1796      0.03  Q         |          |          |      V  |
18+45       0.1798      0.03  Q         |          |          |      V  |
18+50       0.1800      0.03  Q         |          |          |      V  |
18+55       0.1801      0.02  Q         |          |          |      V  |
19+ 0       0.1802      0.02  Q         |          |          |      V  |
19+ 5       0.1804      0.02  Q         |          |          |      V  |
19+10       0.1806      0.03  Q         |          |          |       V |
19+15       0.1807      0.03  Q         |          |          |       V |
19+20       0.1809      0.03  Q         |          |          |       V |
19+25       0.1812      0.03  Q         |          |          |       V |
19+30       0.1814      0.04  Q         |          |          |       V |
19+35       0.1817      0.03  Q         |          |          |       V |
19+40       0.1819      0.03  Q         |          |          |       V |
19+45       0.1821      0.03  Q         |          |          |       V |
19+50       0.1822      0.03  Q         |          |          |       V |
19+55       0.1824      0.02  Q         |          |          |       V |
20+ 0       0.1825      0.02  Q         |          |          |       V |
20+ 5       0.1827      0.02  Q         |          |          |       V |
20+10       0.1828      0.03  Q         |          |          |       V |
20+15       0.1830      0.03  Q         |          |          |       V |
20+20       0.1832      0.03  Q         |          |          |       V |
20+25       0.1834      0.03  Q         |          |          |       V |
20+30       0.1836      0.03  Q         |          |          |       V |
20+35       0.1838      0.03  Q         |          |          |       V |
20+40       0.1840      0.03  Q         |          |          |       V |
20+45       0.1842      0.03  Q         |          |          |       V |
20+50       0.1843      0.03  Q         |          |          |       V |
20+55       0.1845      0.02  Q         |          |          |       V |
21+ 0       0.1846      0.02  Q         |          |          |       V |
21+ 5       0.1848      0.02  Q         |          |          |       V |
21+10       0.1849      0.03  Q         |          |          |       V |
21+15       0.1851      0.03  Q         |          |          |       V |
21+20       0.1853      0.02  Q         |          |          |        V|
21+25       0.1854      0.02  Q         |          |          |        V|
21+30       0.1856      0.02  Q         |          |          |        V|
21+35       0.1857      0.02  Q         |          |          |        V|
21+40       0.1859      0.03  Q         |          |          |        V|
21+45       0.1861      0.03  Q         |          |          |        V|
21+50       0.1862      0.02  Q         |          |          |        V|
21+55       0.1864      0.02  Q         |          |          |        V|
22+ 0       0.1865      0.02  Q         |          |          |        V|
22+ 5       0.1866      0.02  Q         |          |          |        V|
22+10       0.1868      0.03  Q         |          |          |        V|
22+15       0.1870      0.03  Q         |          |          |        V|
22+20       0.1872      0.02  Q         |          |          |        V|
22+25       0.1873      0.02  Q         |          |          |        V|
22+30       0.1875      0.02  Q         |          |          |        V|
22+35       0.1876      0.02  Q         |          |          |        V|
22+40       0.1877      0.02  Q         |          |          |        V|
22+45       0.1878      0.02  Q         |          |          |        V|
22+50       0.1880      0.02  Q         |          |          |        V|
22+55       0.1881      0.02  Q         |          |          |        V|
23+ 0       0.1882      0.02  Q         |          |          |        V|
23+ 5       0.1883      0.02  Q         |          |          |        V|
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  23+10       0.1885      0.02  Q          |          |          |         V|
  23+15       0.1886      0.02  Q          |          |          |         V|
  23+20       0.1887      0.02  Q          |          |          |         V|
  23+25       0.1889      0.02  Q          |          |          |         V|
  23+30       0.1890      0.02  Q          |          |          |         V|
  23+35       0.1891      0.02  Q          |          |          |         V|
  23+40       0.1892      0.02  Q          |          |          |         V|
  23+45       0.1894      0.02  Q          |          |          |         V|
  23+50       0.1895      0.02  Q          |          |          |         V|
  23+55       0.1896      0.02  Q          |          |          |         V|
  24+ 0       0.1897      0.02  Q          |          |          |         V|
  24+ 5       0.1898      0.01  Q          |          |          |         V|
  24+10       0.1899      0.00  Q          |          |          |         V|
  24+15       0.1899      0.00  Q          |          |          |         V|
  24+20       0.1899      0.00  Q          |          |          |         V|
  24+25       0.1899      0.00  Q          |          |          |         V|
  24+30       0.1899      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

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Study date 07/10/25 File: tcpd2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
OFFSITE AREA "D" PROPOSED CONDITION
10-YEAR
24-HOUR

Drainage Area = 12.66(Ac.) = 0.020 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 12.66(Ac.) = 0.020 Sq. Mi.
Length along longest watercourse = 1947.00(Ft.)
Length along longest watercourse measured to centroid = 974.00(Ft.)
Length along longest watercourse = 0.369 Mi.
Length along longest watercourse measured to centroid = 0.184 Mi.
Difference in elevation = 388.00(Ft.)
Slope along watercourse = 1052.2034 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.069 Hr.
Lag time = 4.15 Min.
25% of lag time = 1.04 Min.
40% of lag time = 1.66 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
12.66	1.80	22.79

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
12.66	4.50	56.97

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
12.660	89.00	0.000

Total Area Entered = 12.66(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
89.0	89.0	0.141	0.000	0.141	1.000	0.141
					Sum (F) =	0.141

Area averaged mean soil loss (F) (In/Hr) = 0.141
Minimum soil loss rate ((In/Hr)) = 0.071
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	120.580	25.367	3.237
2	0.167	241.160	48.701	6.214
3	0.250	361.740	13.258	1.692
4	0.333	482.320	5.998	0.765
5	0.417	602.900	3.357	0.428
6	0.500	723.480	1.915	0.244
7	0.583	844.060	1.405	0.179
		Sum = 100.000	Sum=	12.759

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.251)	0.021	0.002
2	0.17	0.07	0.023	(0.250)	0.021	0.002
3	0.25	0.07	0.023	(0.249)	0.021	0.002
4	0.33	0.10	0.035	(0.248)	0.031	0.003
5	0.42	0.10	0.035	(0.247)	0.031	0.003
6	0.50	0.10	0.035	(0.246)	0.031	0.003
7	0.58	0.10	0.035	(0.245)	0.031	0.003
8	0.67	0.10	0.035	(0.244)	0.031	0.003
9	0.75	0.10	0.035	(0.243)	0.031	0.003
10	0.83	0.13	0.047	(0.242)	0.042	0.005
11	0.92	0.13	0.047	(0.241)	0.042	0.005
12	1.00	0.13	0.047	(0.240)	0.042	0.005
13	1.08	0.10	0.035	(0.239)	0.031	0.003
14	1.17	0.10	0.035	(0.238)	0.031	0.003
15	1.25	0.10	0.035	(0.237)	0.031	0.003
16	1.33	0.10	0.035	(0.236)	0.031	0.003
17	1.42	0.10	0.035	(0.235)	0.031	0.003
18	1.50	0.10	0.035	(0.234)	0.031	0.003
19	1.58	0.10	0.035	(0.234)	0.031	0.003

20	1.67	0.10	0.035	(0.233)	0.031	0.003
21	1.75	0.10	0.035	(0.232)	0.031	0.003
22	1.83	0.13	0.047	(0.231)	0.042	0.005
23	1.92	0.13	0.047	(0.230)	0.042	0.005
24	2.00	0.13	0.047	(0.229)	0.042	0.005
25	2.08	0.13	0.047	(0.228)	0.042	0.005
26	2.17	0.13	0.047	(0.227)	0.042	0.005
27	2.25	0.13	0.047	(0.226)	0.042	0.005
28	2.33	0.13	0.047	(0.225)	0.042	0.005
29	2.42	0.13	0.047	(0.224)	0.042	0.005
30	2.50	0.13	0.047	(0.223)	0.042	0.005
31	2.58	0.17	0.058	(0.222)	0.052	0.006
32	2.67	0.17	0.058	(0.221)	0.052	0.006
33	2.75	0.17	0.058	(0.221)	0.052	0.006
34	2.83	0.17	0.058	(0.220)	0.052	0.006
35	2.92	0.17	0.058	(0.219)	0.052	0.006
36	3.00	0.17	0.058	(0.218)	0.052	0.006
37	3.08	0.17	0.058	(0.217)	0.052	0.006
38	3.17	0.17	0.058	(0.216)	0.052	0.006
39	3.25	0.17	0.058	(0.215)	0.052	0.006
40	3.33	0.17	0.058	(0.214)	0.052	0.006
41	3.42	0.17	0.058	(0.213)	0.052	0.006
42	3.50	0.17	0.058	(0.212)	0.052	0.006
43	3.58	0.17	0.058	(0.212)	0.052	0.006
44	3.67	0.17	0.058	(0.211)	0.052	0.006
45	3.75	0.17	0.058	(0.210)	0.052	0.006
46	3.83	0.20	0.070	(0.209)	0.063	0.007
47	3.92	0.20	0.070	(0.208)	0.063	0.007
48	4.00	0.20	0.070	(0.207)	0.063	0.007
49	4.08	0.20	0.070	(0.206)	0.063	0.007
50	4.17	0.20	0.070	(0.205)	0.063	0.007
51	4.25	0.20	0.070	(0.205)	0.063	0.007
52	4.33	0.23	0.082	(0.204)	0.073	0.008
53	4.42	0.23	0.082	(0.203)	0.073	0.008
54	4.50	0.23	0.082	(0.202)	0.073	0.008
55	4.58	0.23	0.082	(0.201)	0.073	0.008
56	4.67	0.23	0.082	(0.200)	0.073	0.008
57	4.75	0.23	0.082	(0.199)	0.073	0.008
58	4.83	0.27	0.093	(0.198)	0.084	0.009
59	4.92	0.27	0.093	(0.198)	0.084	0.009
60	5.00	0.27	0.093	(0.197)	0.084	0.009
61	5.08	0.20	0.070	(0.196)	0.063	0.007
62	5.17	0.20	0.070	(0.195)	0.063	0.007
63	5.25	0.20	0.070	(0.194)	0.063	0.007
64	5.33	0.23	0.082	(0.193)	0.073	0.008
65	5.42	0.23	0.082	(0.193)	0.073	0.008
66	5.50	0.23	0.082	(0.192)	0.073	0.008
67	5.58	0.27	0.093	(0.191)	0.084	0.009
68	5.67	0.27	0.093	(0.190)	0.084	0.009
69	5.75	0.27	0.093	(0.189)	0.084	0.009
70	5.83	0.27	0.093	(0.188)	0.084	0.009
71	5.92	0.27	0.093	(0.187)	0.084	0.009
72	6.00	0.27	0.093	(0.187)	0.084	0.009
73	6.08	0.30	0.105	(0.186)	0.094	0.010
74	6.17	0.30	0.105	(0.185)	0.094	0.010
75	6.25	0.30	0.105	(0.184)	0.094	0.010
76	6.33	0.30	0.105	(0.183)	0.094	0.010
77	6.42	0.30	0.105	(0.183)	0.094	0.010
78	6.50	0.30	0.105	(0.182)	0.094	0.010
79	6.58	0.33	0.116	(0.181)	0.105	0.012
80	6.67	0.33	0.116	(0.180)	0.105	0.012
81	6.75	0.33	0.116	(0.179)	0.105	0.012
82	6.83	0.33	0.116	(0.178)	0.105	0.012

83	6.92	0.33	0.116	(	0.178)		0.105		0.012
84	7.00	0.33	0.116	(	0.177)		0.105		0.012
85	7.08	0.33	0.116	(	0.176)		0.105		0.012
86	7.17	0.33	0.116	(	0.175)		0.105		0.012
87	7.25	0.33	0.116	(	0.174)		0.105		0.012
88	7.33	0.37	0.128	(	0.174)		0.115		0.013
89	7.42	0.37	0.128	(	0.173)		0.115		0.013
90	7.50	0.37	0.128	(	0.172)		0.115		0.013
91	7.58	0.40	0.140	(	0.171)		0.126		0.014
92	7.67	0.40	0.140	(	0.170)		0.126		0.014
93	7.75	0.40	0.140	(	0.170)		0.126		0.014
94	7.83	0.43	0.151	(	0.169)		0.136		0.015
95	7.92	0.43	0.151	(	0.168)		0.136		0.015
96	8.00	0.43	0.151	(	0.167)		0.136		0.015
97	8.08	0.50	0.175	(	0.167)		0.157		0.017
98	8.17	0.50	0.175	(	0.166)		0.157		0.017
99	8.25	0.50	0.175	(	0.165)		0.157		0.017
100	8.33	0.50	0.175	(	0.164)		0.157		0.017
101	8.42	0.50	0.175	(	0.163)		0.157		0.017
102	8.50	0.50	0.175	(	0.163)		0.157		0.017
103	8.58	0.53	0.186		0.162	(	0.168)		0.024
104	8.67	0.53	0.186		0.161	(	0.168)		0.025
105	8.75	0.53	0.186		0.160	(	0.168)		0.026
106	8.83	0.57	0.198		0.160	(	0.178)		0.038
107	8.92	0.57	0.198		0.159	(	0.178)		0.039
108	9.00	0.57	0.198		0.158	(	0.178)		0.040
109	9.08	0.63	0.221		0.157	(	0.199)		0.064
110	9.17	0.63	0.221		0.157	(	0.199)		0.065
111	9.25	0.63	0.221		0.156	(	0.199)		0.065
112	9.33	0.67	0.233		0.155	(	0.210)		0.078
113	9.42	0.67	0.233		0.154	(	0.210)		0.078
114	9.50	0.67	0.233		0.154	(	0.210)		0.079
115	9.58	0.70	0.245		0.153	(	0.220)		0.092
116	9.67	0.70	0.245		0.152	(	0.220)		0.092
117	9.75	0.70	0.245		0.151	(	0.220)		0.093
118	9.83	0.73	0.256		0.151	(	0.231)		0.105
119	9.92	0.73	0.256		0.150	(	0.231)		0.106
120	10.00	0.73	0.256		0.149	(	0.231)		0.107
121	10.08	0.50	0.175		0.149	(	0.157)		0.026
122	10.17	0.50	0.175		0.148	(	0.157)		0.027
123	10.25	0.50	0.175		0.147	(	0.157)		0.027
124	10.33	0.50	0.175		0.146	(	0.157)		0.028
125	10.42	0.50	0.175		0.146	(	0.157)		0.029
126	10.50	0.50	0.175		0.145	(	0.157)		0.030
127	10.58	0.67	0.233		0.144	(	0.210)		0.089
128	10.67	0.67	0.233		0.144	(	0.210)		0.089
129	10.75	0.67	0.233		0.143	(	0.210)		0.090
130	10.83	0.67	0.233		0.142	(	0.210)		0.091
131	10.92	0.67	0.233		0.142	(	0.210)		0.091
132	11.00	0.67	0.233		0.141	(	0.210)		0.092
133	11.08	0.63	0.221		0.140	(	0.199)		0.081
134	11.17	0.63	0.221		0.139	(	0.199)		0.082
135	11.25	0.63	0.221		0.139	(	0.199)		0.082
136	11.33	0.63	0.221		0.138	(	0.199)		0.083
137	11.42	0.63	0.221		0.137	(	0.199)		0.084
138	11.50	0.63	0.221		0.137	(	0.199)		0.085
139	11.58	0.57	0.198		0.136	(	0.178)		0.062
140	11.67	0.57	0.198		0.135	(	0.178)		0.063
141	11.75	0.57	0.198		0.135	(	0.178)		0.063
142	11.83	0.60	0.210		0.134	(	0.189)		0.076
143	11.92	0.60	0.210		0.133	(	0.189)		0.076
144	12.00	0.60	0.210		0.133	(	0.189)		0.077
145	12.08	0.83	0.291		0.132	(	0.262)		0.159

146	12.17	0.83	0.291		0.131	(0.262)		0.160
147	12.25	0.83	0.291		0.131	(0.262)		0.160
148	12.33	0.87	0.303		0.130	(0.272)		0.173
149	12.42	0.87	0.303		0.129	(0.272)		0.173
150	12.50	0.87	0.303		0.129	(0.272)		0.174
151	12.58	0.93	0.326		0.128	(0.293)		0.198
152	12.67	0.93	0.326		0.127	(0.293)		0.199
153	12.75	0.93	0.326		0.127	(0.293)		0.199
154	12.83	0.97	0.338		0.126	(0.304)		0.212
155	12.92	0.97	0.338		0.126	(0.304)		0.212
156	13.00	0.97	0.338		0.125	(0.304)		0.213
157	13.08	1.13	0.396		0.124	(0.356)		0.272
158	13.17	1.13	0.396		0.124	(0.356)		0.272
159	13.25	1.13	0.396		0.123	(0.356)		0.273
160	13.33	1.13	0.396		0.122	(0.356)		0.274
161	13.42	1.13	0.396		0.122	(0.356)		0.274
162	13.50	1.13	0.396		0.121	(0.356)		0.275
163	13.58	0.77	0.268		0.120	(0.241)		0.147
164	13.67	0.77	0.268		0.120	(0.241)		0.148
165	13.75	0.77	0.268		0.119	(0.241)		0.149
166	13.83	0.77	0.268		0.119	(0.241)		0.149
167	13.92	0.77	0.268		0.118	(0.241)		0.150
168	14.00	0.77	0.268		0.117	(0.241)		0.150
169	14.08	0.90	0.314		0.117	(0.283)		0.198
170	14.17	0.90	0.314		0.116	(0.283)		0.198
171	14.25	0.90	0.314		0.116	(0.283)		0.199
172	14.33	0.87	0.303		0.115	(0.272)		0.188
173	14.42	0.87	0.303		0.114	(0.272)		0.188
174	14.50	0.87	0.303		0.114	(0.272)		0.189
175	14.58	0.87	0.303		0.113	(0.272)		0.189
176	14.67	0.87	0.303		0.113	(0.272)		0.190
177	14.75	0.87	0.303		0.112	(0.272)		0.191
178	14.83	0.83	0.291		0.112	(0.262)		0.179
179	14.92	0.83	0.291		0.111	(0.262)		0.180
180	15.00	0.83	0.291		0.110	(0.262)		0.181
181	15.08	0.80	0.279		0.110	(0.251)		0.170
182	15.17	0.80	0.279		0.109	(0.251)		0.170
183	15.25	0.80	0.279		0.109	(0.251)		0.171
184	15.33	0.77	0.268		0.108	(0.241)		0.160
185	15.42	0.77	0.268		0.108	(0.241)		0.160
186	15.50	0.77	0.268		0.107	(0.241)		0.161
187	15.58	0.63	0.221		0.107	(0.199)		0.115
188	15.67	0.63	0.221		0.106	(0.199)		0.115
189	15.75	0.63	0.221		0.105	(0.199)		0.116
190	15.83	0.63	0.221		0.105	(0.199)		0.116
191	15.92	0.63	0.221		0.104	(0.199)		0.117
192	16.00	0.63	0.221		0.104	(0.199)		0.117
193	16.08	0.13	0.047	(0.103)		0.042		0.005
194	16.17	0.13	0.047	(0.103)		0.042		0.005
195	16.25	0.13	0.047	(0.102)		0.042		0.005
196	16.33	0.13	0.047	(0.102)		0.042		0.005
197	16.42	0.13	0.047	(0.101)		0.042		0.005
198	16.50	0.13	0.047	(0.101)		0.042		0.005
199	16.58	0.10	0.035	(0.100)		0.031		0.003
200	16.67	0.10	0.035	(0.100)		0.031		0.003
201	16.75	0.10	0.035	(0.099)		0.031		0.003
202	16.83	0.10	0.035	(0.099)		0.031		0.003
203	16.92	0.10	0.035	(0.098)		0.031		0.003
204	17.00	0.10	0.035	(0.098)		0.031		0.003
205	17.08	0.17	0.058	(0.097)		0.052		0.006
206	17.17	0.17	0.058	(0.097)		0.052		0.006
207	17.25	0.17	0.058	(0.096)		0.052		0.006
208	17.33	0.17	0.058	(0.096)		0.052		0.006

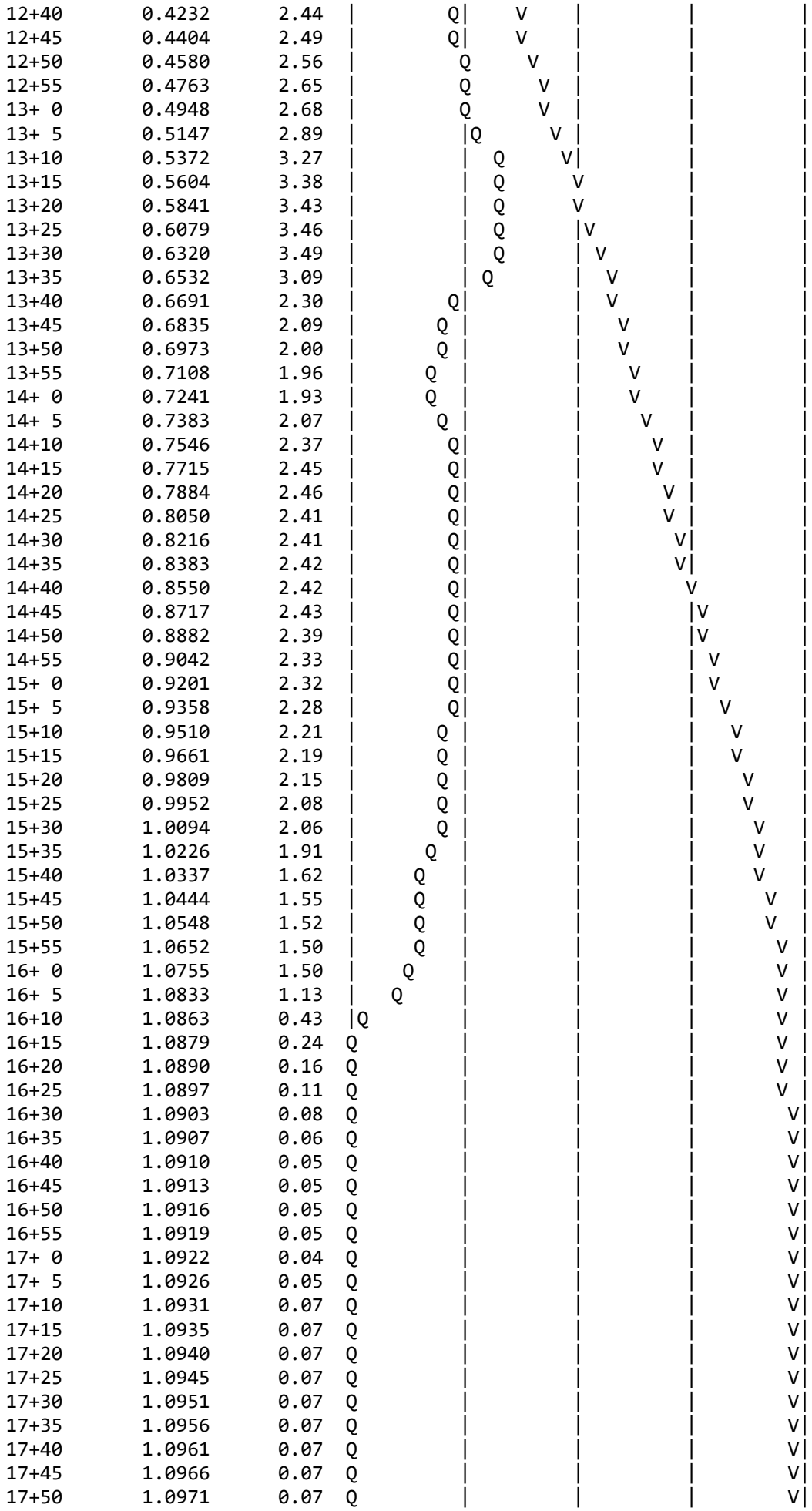
209	17.42	0.17	0.058	(0.095)	0.052	0.006
210	17.50	0.17	0.058	(0.095)	0.052	0.006
211	17.58	0.17	0.058	(0.094)	0.052	0.006
212	17.67	0.17	0.058	(0.094)	0.052	0.006
213	17.75	0.17	0.058	(0.093)	0.052	0.006
214	17.83	0.13	0.047	(0.093)	0.042	0.005
215	17.92	0.13	0.047	(0.092)	0.042	0.005
216	18.00	0.13	0.047	(0.092)	0.042	0.005
217	18.08	0.13	0.047	(0.092)	0.042	0.005
218	18.17	0.13	0.047	(0.091)	0.042	0.005
219	18.25	0.13	0.047	(0.091)	0.042	0.005
220	18.33	0.13	0.047	(0.090)	0.042	0.005
221	18.42	0.13	0.047	(0.090)	0.042	0.005
222	18.50	0.13	0.047	(0.089)	0.042	0.005
223	18.58	0.10	0.035	(0.089)	0.031	0.003
224	18.67	0.10	0.035	(0.088)	0.031	0.003
225	18.75	0.10	0.035	(0.088)	0.031	0.003
226	18.83	0.07	0.023	(0.088)	0.021	0.002
227	18.92	0.07	0.023	(0.087)	0.021	0.002
228	19.00	0.07	0.023	(0.087)	0.021	0.002
229	19.08	0.10	0.035	(0.086)	0.031	0.003
230	19.17	0.10	0.035	(0.086)	0.031	0.003
231	19.25	0.10	0.035	(0.086)	0.031	0.003
232	19.33	0.13	0.047	(0.085)	0.042	0.005
233	19.42	0.13	0.047	(0.085)	0.042	0.005
234	19.50	0.13	0.047	(0.084)	0.042	0.005
235	19.58	0.10	0.035	(0.084)	0.031	0.003
236	19.67	0.10	0.035	(0.084)	0.031	0.003
237	19.75	0.10	0.035	(0.083)	0.031	0.003
238	19.83	0.07	0.023	(0.083)	0.021	0.002
239	19.92	0.07	0.023	(0.082)	0.021	0.002
240	20.00	0.07	0.023	(0.082)	0.021	0.002
241	20.08	0.10	0.035	(0.082)	0.031	0.003
242	20.17	0.10	0.035	(0.081)	0.031	0.003
243	20.25	0.10	0.035	(0.081)	0.031	0.003
244	20.33	0.10	0.035	(0.081)	0.031	0.003
245	20.42	0.10	0.035	(0.080)	0.031	0.003
246	20.50	0.10	0.035	(0.080)	0.031	0.003
247	20.58	0.10	0.035	(0.080)	0.031	0.003
248	20.67	0.10	0.035	(0.079)	0.031	0.003
249	20.75	0.10	0.035	(0.079)	0.031	0.003
250	20.83	0.07	0.023	(0.079)	0.021	0.002
251	20.92	0.07	0.023	(0.078)	0.021	0.002
252	21.00	0.07	0.023	(0.078)	0.021	0.002
253	21.08	0.10	0.035	(0.078)	0.031	0.003
254	21.17	0.10	0.035	(0.077)	0.031	0.003
255	21.25	0.10	0.035	(0.077)	0.031	0.003
256	21.33	0.07	0.023	(0.077)	0.021	0.002
257	21.42	0.07	0.023	(0.077)	0.021	0.002
258	21.50	0.07	0.023	(0.076)	0.021	0.002
259	21.58	0.10	0.035	(0.076)	0.031	0.003
260	21.67	0.10	0.035	(0.076)	0.031	0.003
261	21.75	0.10	0.035	(0.075)	0.031	0.003
262	21.83	0.07	0.023	(0.075)	0.021	0.002
263	21.92	0.07	0.023	(0.075)	0.021	0.002
264	22.00	0.07	0.023	(0.075)	0.021	0.002
265	22.08	0.10	0.035	(0.074)	0.031	0.003
266	22.17	0.10	0.035	(0.074)	0.031	0.003
267	22.25	0.10	0.035	(0.074)	0.031	0.003
268	22.33	0.07	0.023	(0.074)	0.021	0.002
269	22.42	0.07	0.023	(0.073)	0.021	0.002
270	22.50	0.07	0.023	(0.073)	0.021	0.002
271	22.58	0.07	0.023	(0.073)	0.021	0.002

```
272  22.67     0.07      0.023       (  0.073)       0.021        0.002
273  22.75     0.07      0.023       (  0.073)       0.021        0.002
274  22.83     0.07      0.023       (  0.072)       0.021        0.002
275  22.92     0.07      0.023       (  0.072)       0.021        0.002
276  23.00     0.07      0.023       (  0.072)       0.021        0.002
277  23.08     0.07      0.023       (  0.072)       0.021        0.002
278  23.17     0.07      0.023       (  0.072)       0.021        0.002
279  23.25     0.07      0.023       (  0.072)       0.021        0.002
280  23.33     0.07      0.023       (  0.071)       0.021        0.002
281  23.42     0.07      0.023       (  0.071)       0.021        0.002
282  23.50     0.07      0.023       (  0.071)       0.021        0.002
283  23.58     0.07      0.023       (  0.071)       0.021        0.002
284  23.67     0.07      0.023       (  0.071)       0.021        0.002
285  23.75     0.07      0.023       (  0.071)       0.021        0.002
286  23.83     0.07      0.023       (  0.071)       0.021        0.002
287  23.92     0.07      0.023       (  0.071)       0.021        0.002
288  24.00     0.07      0.023       (  0.071)       0.021        0.002
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    12.7
       Flood volume = Effective rainfall      1.06(In)
        times area      12.7(Ac.)/[(In)/(Ft.)] =       1.1(Ac.Ft)
       Total soil loss =      1.85(In)
       Total soil loss =     1.953(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =       48691.6 Cubic Feet
       Total soil loss =       85073.4 Cubic Feet
       ------------------------------------------------------------------------
        Peak flow rate of this hydrograph =      3.487(CFS)
       ------------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0001      0.01  Q         |         |         |         |
   0+10       0.0002      0.02  Q         |         |         |         |
   0+15       0.0004      0.03  Q         |         |         |         |
   0+20       0.0006      0.03  Q         |         |         |         |
   0+25       0.0009      0.04  Q         |         |         |         |
   0+30       0.0012      0.04  Q         |         |         |         |
   0+35       0.0015      0.04  Q         |         |         |         |
   0+40       0.0018      0.04  Q         |         |         |         |
   0+45       0.0021      0.04  Q         |         |         |         |
   0+50       0.0024      0.05  Q         |         |         |         |
   0+55       0.0028      0.06  Q         |         |         |         |
   1+ 0       0.0032      0.06  Q         |         |         |         |
   1+ 5       0.0036      0.05  Q         |         |         |         |
   1+10       0.0039      0.05  Q         |         |         |         |
   1+15       0.0042      0.05  Q         |         |         |         |
   1+20       0.0045      0.05  Q         |         |         |         |
   1+25       0.0048      0.05  Q         |         |         |         |
   1+30       0.0051      0.04  Q         |         |         |         |
   1+35       0.0055      0.04  Q         |         |         |         |
   1+40       0.0058      0.04  Q         |         |         |         |
   1+45       0.0061      0.04  Q         |         |         |         |
   1+50       0.0064      0.05  Q         |         |         |         |
   1+55       0.0068      0.06  Q         |         |         |         |
   2+ 0       0.0072      0.06  Q         |         |         |         |
   2+ 5       0.0076      0.06  Q         |         |         |         |
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2+10	0.0080	0.06	Q				
2+15	0.0084	0.06	Q				
2+20	0.0088	0.06	Q				
2+25	0.0092	0.06	Q				
2+30	0.0096	0.06	Q				
2+35	0.0101	0.06	Q				
2+40	0.0105	0.07	Q				
2+45	0.0110	0.07	Q				
2+50	0.0115	0.07	Q				
2+55	0.0121	0.07	Q				
3+ 0	0.0126	0.07	Q				
3+ 5	0.0131	0.07	Q				
3+10	0.0136	0.07	Q				
3+15	0.0141	0.07	Q				
3+20	0.0146	0.07	Q				
3+25	0.0151	0.07	Q				
3+30	0.0156	0.07	Q				
3+35	0.0161	0.07	Q				
3+40	0.0167	0.07	Q				
3+45	0.0172	0.07	Q				
3+50	0.0177	0.08	Q				
3+55	0.0183	0.09	Q				
4+ 0	0.0189	0.09	Q				
4+ 5	0.0195	0.09	Q				
4+10	0.0201	0.09	Q				
4+15	0.0207	0.09	Q				
4+20	0.0214	0.09	Q				
4+25	0.0221	0.10	Q				
4+30	0.0228	0.10	Q				
4+35	0.0235	0.10	Q				
4+40	0.0242	0.10	Q				
4+45	0.0249	0.10	Q				
4+50	0.0256	0.11	Q				
4+55	0.0264	0.12	Q				
5+ 0	0.0272	0.12	Q				
5+ 5	0.0280	0.11	QV				
5+10	0.0287	0.10	QV				
5+15	0.0293	0.09	QV				
5+20	0.0300	0.09	QV				
5+25	0.0307	0.10	QV				
5+30	0.0314	0.10	QV				
5+35	0.0321	0.11	QV				
5+40	0.0329	0.11	QV				
5+45	0.0337	0.12	QV				
5+50	0.0345	0.12	QV				
5+55	0.0353	0.12	QV				
6+ 0	0.0361	0.12	QV				
6+ 5	0.0370	0.12	QV				
6+10	0.0379	0.13	QV				
6+15	0.0388	0.13	QV				
6+20	0.0397	0.13	QV				
6+25	0.0406	0.13	QV				
6+30	0.0415	0.13	QV				
6+35	0.0425	0.14	QV				
6+40	0.0435	0.14	QV				
6+45	0.0445	0.15	QV				
6+50	0.0455	0.15	QV				
6+55	0.0465	0.15	QV				
7+ 0	0.0476	0.15	QV				
7+ 5	0.0486	0.15	QV				
7+10	0.0496	0.15	QV				
7+15	0.0506	0.15	QV				
7+20	0.0517	0.15	QV				

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 7+25       0.0528      0.16  QV        |         |         |         |
 7+30       0.0539      0.16  QV        |         |         |         |
 7+35       0.0550      0.17  QV        |         |         |         |
 7+40       0.0562      0.17  Q V       |         |         |         |
 7+45       0.0574      0.18  Q V       |         |         |         |
 7+50       0.0587      0.18  Q V       |         |         |         |
 7+55       0.0600      0.19  Q V       |         |         |         |
 8+ 0       0.0613      0.19  Q V       |         |         |         |
 8+ 5       0.0627      0.20  Q V       |         |         |         |
 8+10       0.0642      0.21  Q V       |         |         |         |
 8+15       0.0657      0.22  Q V       |         |         |         |
 8+20       0.0672      0.22  Q V       |         |         |         |
 8+25       0.0687      0.22  Q V       |         |         |         |
 8+30       0.0703      0.22  Q V       |         |         |         |
 8+35       0.0719      0.25  Q V       |         |         |         |
 8+40       0.0739      0.29  |QV       |         |         |         |
 8+45       0.0761      0.31  |QV       |         |         |         |
 8+50       0.0786      0.36  |QV       |         |         |         |
 8+55       0.0816      0.44  |QV       |         |         |         |
 9+ 0       0.0849      0.48  |Q V      |         |         |         |
 9+ 5       0.0888      0.57  | QV      |         |         |         |
 9+10       0.0939      0.73  | QV      |         |         |         |
 9+15       0.0992      0.78  |  Q      |         |         |         |
 9+20       0.1051      0.85  |  Q      |         |         |         |
 9+25       0.1116      0.94  |  Q      |         |         |         |
 9+30       0.1183      0.98  |  QV     |         |         |         |
 9+35       0.1254      1.04  |   Q     |         |         |         |
 9+40       0.1331      1.12  |   Q     |         |         |         |
 9+45       0.1411      1.15  |   QV    |         |         |         |
 9+50       0.1495      1.21  |   QV    |         |         |         |
 9+55       0.1584      1.30  |    Q    |         |         |         |
10+ 0       0.1676      1.33  |    Q    |         |         |         |
10+ 5       0.1751      1.09  |   Q V   |         |         |         |
10+10       0.1792      0.60  | Q   V   |         |         |         |
10+15       0.1824      0.47  |Q    V   |         |         |         |
10+20       0.1853      0.42  |Q    V   |         |         |         |
10+25       0.1880      0.39  |Q    V   |         |         |         |
10+30       0.1906      0.38  |Q    V   |         |         |         |
10+35       0.1945      0.56  | Q   V   |         |         |         |
10+40       0.2009      0.94  |  Q   V  |         |         |         |
10+45       0.2081      1.04  |   Q  V  |         |         |         |
10+50       0.2157      1.10  |   Q  V  |         |         |         |
10+55       0.2234      1.13  |   Q  V  |         |         |         |
11+ 0       0.2314      1.15  |   Q   V |         |         |         |
11+ 5       0.2392      1.14  |   Q   V |         |         |         |
11+10       0.2466      1.07  |   Q   V |         |         |         |
11+15       0.2539      1.06  |   Q    V|         |         |         |
11+20       0.2612      1.06  |   Q    V|         |         |         |
11+25       0.2685      1.06  |   Q    V|         |         |         |
11+30       0.2759      1.07  |   Q    V|         |         |         |
11+35       0.2828      1.00  |   Q     V         |         |         |
11+40       0.2888      0.87  |  Q      V         |         |         |
11+45       0.2945      0.83  |  Q      V         |         |         |
11+50       0.3004      0.86  |  Q      V         |         |         |
11+55       0.3069      0.93  |  Q      V         |         |         |
12+ 0       0.3135      0.96  |  Q      |V        |         |         |
12+ 5       0.3220      1.23  |   Q     |V        |         |         |
12+10       0.3340      1.75  |      Q  |V        |         |         |
12+15       0.3471      1.90  |      Q  | V       |         |         |
12+20       0.3610      2.01  |       Q | V       |         |         |
12+25       0.3757      2.13  |       Q |  V      |         |         |
12+30       0.3907      2.18  |       Q |  V      |         |         |
12+35       0.4064      2.28  |        Q|   V     |         |         |
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12+40	0.4232	2.44	
12+45	0.4404	2.49	
12+50	0.4580	2.56	
12+55	0.4763	2.65	
13+ 0	0.4948	2.68	
13+ 5	0.5147	2.89	
13+10	0.5372	3.27	
13+15	0.5604	3.38	
13+20	0.5841	3.43	
13+25	0.6079	3.46	
13+30	0.6320	3.49	
13+35	0.6532	3.09	
13+40	0.6691	2.30	
13+45	0.6835	2.09	
13+50	0.6973	2.00	
13+55	0.7108	1.96	
14+ 0	0.7241	1.93	
14+ 5	0.7383	2.07	
14+10	0.7546	2.37	
14+15	0.7715	2.45	
14+20	0.7884	2.46	
14+25	0.8050	2.41	
14+30	0.8216	2.41	
14+35	0.8383	2.42	
14+40	0.8550	2.42	
14+45	0.8717	2.43	
14+50	0.8882	2.39	
14+55	0.9042	2.33	
15+ 0	0.9201	2.32	
15+ 5	0.9358	2.28	
15+10	0.9510	2.21	
15+15	0.9661	2.19	
15+20	0.9809	2.15	
15+25	0.9952	2.08	
15+30	1.0094	2.06	
15+35	1.0226	1.91	
15+40	1.0337	1.62	
15+45	1.0444	1.55	
15+50	1.0548	1.52	
15+55	1.0652	1.50	
16+ 0	1.0755	1.50	
16+ 5	1.0833	1.13	
16+10	1.0863	0.43	
16+15	1.0879	0.24	
16+20	1.0890	0.16	
16+25	1.0897	0.11	
16+30	1.0903	0.08	
16+35	1.0907	0.06	
16+40	1.0910	0.05	
16+45	1.0913	0.05	
16+50	1.0916	0.05	
16+55	1.0919	0.05	
17+ 0	1.0922	0.04	
17+ 5	1.0926	0.05	
17+10	1.0931	0.07	
17+15	1.0935	0.07	
17+20	1.0940	0.07	
17+25	1.0945	0.07	
17+30	1.0951	0.07	
17+35	1.0956	0.07	
17+40	1.0961	0.07	
17+45	1.0966	0.07	
17+50	1.0971	0.07	

17+55	1.0975	0.06	Q	|	|	|	V|
18+ 0	1.0979	0.06	Q	|	|	|	V|
18+ 5	1.0984	0.06	Q	|	|	|	V|
18+10	1.0988	0.06	Q	|	|	|	V|
18+15	1.0992	0.06	Q	|	|	|	V|
18+20	1.0996	0.06	Q	|	|	|	V|
18+25	1.1000	0.06	Q	|	|	|	V|
18+30	1.1004	0.06	Q	|	|	|	V|
18+35	1.1008	0.06	Q	|	|	|	V|
18+40	1.1011	0.05	Q	|	|	|	V|
18+45	1.1014	0.05	Q	|	|	|	V|
18+50	1.1017	0.04	Q	|	|	|	V|
18+55	1.1020	0.03	Q	|	|	|	V|
19+ 0	1.1022	0.03	Q	|	|	|	V|
19+ 5	1.1024	0.03	Q	|	|	|	V|
19+10	1.1027	0.04	Q	|	|	|	V|
19+15	1.1030	0.04	Q	|	|	|	V|
19+20	1.1033	0.05	Q	|	|	|	V|
19+25	1.1037	0.06	Q	|	|	|	V|
19+30	1.1041	0.06	Q	|	|	|	V|
19+35	1.1045	0.05	Q	|	|	|	V|
19+40	1.1048	0.05	Q	|	|	|	V|
19+45	1.1051	0.05	Q	|	|	|	V|
19+50	1.1054	0.04	Q	|	|	|	V|
19+55	1.1056	0.03	Q	|	|	|	V|
20+ 0	1.1059	0.03	Q	|	|	|	V|
20+ 5	1.1061	0.03	Q	|	|	|	V|
20+10	1.1064	0.04	Q	|	|	|	V|
20+15	1.1067	0.04	Q	|	|	|	V|
20+20	1.1070	0.04	Q	|	|	|	V|
20+25	1.1073	0.04	Q	|	|	|	V|
20+30	1.1076	0.04	Q	|	|	|	V|
20+35	1.1079	0.04	Q	|	|	|	V|
20+40	1.1082	0.04	Q	|	|	|	V|
20+45	1.1085	0.04	Q	|	|	|	V|
20+50	1.1088	0.04	Q	|	|	|	V|
20+55	1.1090	0.03	Q	|	|	|	V|
21+ 0	1.1092	0.03	Q	|	|	|	V|
21+ 5	1.1095	0.03	Q	|	|	|	V|
21+10	1.1098	0.04	Q	|	|	|	V|
21+15	1.1101	0.04	Q	|	|	|	V|
21+20	1.1103	0.04	Q	|	|	|	V|
21+25	1.1106	0.03	Q	|	|	|	V|
21+30	1.1108	0.03	Q	|	|	|	V|
21+35	1.1110	0.03	Q	|	|	|	V|
21+40	1.1113	0.04	Q	|	|	|	V|
21+45	1.1116	0.04	Q	|	|	|	V|
21+50	1.1119	0.04	Q	|	|	|	V|
21+55	1.1121	0.03	Q	|	|	|	V|
22+ 0	1.1123	0.03	Q	|	|	|	V|
22+ 5	1.1126	0.03	Q	|	|	|	V|
22+10	1.1128	0.04	Q	|	|	|	V|
22+15	1.1131	0.04	Q	|	|	|	V|
22+20	1.1134	0.04	Q	|	|	|	V|
22+25	1.1136	0.03	Q	|	|	|	V|
22+30	1.1139	0.03	Q	|	|	|	V|
22+35	1.1141	0.03	Q	|	|	|	V|
22+40	1.1143	0.03	Q	|	|	|	V|
22+45	1.1145	0.03	Q	|	|	|	V|
22+50	1.1147	0.03	Q	|	|	|	V|
22+55	1.1149	0.03	Q	|	|	|	V|
23+ 0	1.1151	0.03	Q	|	|	|	V|
23+ 5	1.1153	0.03	Q	|	|	|	V|

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  23+10       1.1155      0.03  Q         |         |         |         V|
  23+15       1.1157      0.03  Q         |         |         |         V|
  23+20       1.1159      0.03  Q         |         |         |         V|
  23+25       1.1161      0.03  Q         |         |         |         V|
  23+30       1.1163      0.03  Q         |         |         |         V|
  23+35       1.1165      0.03  Q         |         |         |         V|
  23+40       1.1167      0.03  Q         |         |         |         V|
  23+45       1.1169      0.03  Q         |         |         |         V|
  23+50       1.1171      0.03  Q         |         |         |         V|
  23+55       1.1173      0.03  Q         |         |         |         V|
  24+ 0       1.1175      0.03  Q         |         |         |         V|
  24+ 5       1.1177      0.02  Q         |         |         |         V|
  24+10       1.1178      0.01  Q         |         |         |         V|
  24+15       1.1178      0.00  Q         |         |         |         V|
  24+20       1.1178      0.00  Q         |         |         |         V|
  24+25       1.1178      0.00  Q         |         |         |         V|
  24+30       1.1178      0.00  Q         |         |         |         V|
-------------------------------------------------------------------------
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C.8 - Area "E"

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

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Study date 12/13/24 File: TCPE242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
OFFSITE AREA "E" PROPOSED CONDITION
2-YEAR
24-HOUR

Drainage Area = 1.28(Ac.) = 0.002 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1.28(Ac.) = 0.002 Sq. Mi.
Length along longest watercourse = 276.00(Ft.)
Length along longest watercourse measured to centroid = 138.00(Ft.)
Length along longest watercourse = 0.052 Mi.
Length along longest watercourse measured to centroid = 0.026 Mi.
Difference in elevation = 88.10(Ft.)
Slope along watercourse = 1685.3913 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.014 Hr.
Lag time = 0.86 Min.
25% of lag time = 0.21 Min.
40% of lag time = 0.34 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
1.28	1.80	2.30

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
1.28	4.50	5.76

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.280	86.30	0.000

Total Area Entered = 1.28(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
86.3	72.1	0.337	0.000	0.337	1.000	0.337
					Sum (F) =	0.337

Area averaged mean soil loss (F) (In/Hr) = 0.337
Minimum soil loss rate ((In/Hr)) = 0.169
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	582.186	74.559	0.962
2	0.167	1164.372	25.441	0.328
		Sum = 100.000	Sum=	1.290

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.598)	0.013	0.001
2	0.17	0.07	0.014	(0.596)	0.013	0.001
3	0.25	0.07	0.014	(0.594)	0.013	0.001
4	0.33	0.10	0.022	(0.591)	0.019	0.002
5	0.42	0.10	0.022	(0.589)	0.019	0.002
6	0.50	0.10	0.022	(0.587)	0.019	0.002
7	0.58	0.10	0.022	(0.584)	0.019	0.002
8	0.67	0.10	0.022	(0.582)	0.019	0.002
9	0.75	0.10	0.022	(0.580)	0.019	0.002
10	0.83	0.13	0.029	(0.578)	0.026	0.003
11	0.92	0.13	0.029	(0.575)	0.026	0.003
12	1.00	0.13	0.029	(0.573)	0.026	0.003
13	1.08	0.10	0.022	(0.571)	0.019	0.002
14	1.17	0.10	0.022	(0.568)	0.019	0.002
15	1.25	0.10	0.022	(0.566)	0.019	0.002
16	1.33	0.10	0.022	(0.564)	0.019	0.002
17	1.42	0.10	0.022	(0.562)	0.019	0.002
18	1.50	0.10	0.022	(0.559)	0.019	0.002
19	1.58	0.10	0.022	(0.557)	0.019	0.002
20	1.67	0.10	0.022	(0.555)	0.019	0.002
21	1.75	0.10	0.022	(0.553)	0.019	0.002
22	1.83	0.13	0.029	(0.551)	0.026	0.003
23	1.92	0.13	0.029	(0.548)	0.026	0.003
24	2.00	0.13	0.029	(0.546)	0.026	0.003

25	2.08	0.13	0.029	(0.544)	0.026	0.003
26	2.17	0.13	0.029	(0.542)	0.026	0.003
27	2.25	0.13	0.029	(0.540)	0.026	0.003
28	2.33	0.13	0.029	(0.537)	0.026	0.003
29	2.42	0.13	0.029	(0.535)	0.026	0.003
30	2.50	0.13	0.029	(0.533)	0.026	0.003
31	2.58	0.17	0.036	(0.531)	0.032	0.004
32	2.67	0.17	0.036	(0.529)	0.032	0.004
33	2.75	0.17	0.036	(0.526)	0.032	0.004
34	2.83	0.17	0.036	(0.524)	0.032	0.004
35	2.92	0.17	0.036	(0.522)	0.032	0.004
36	3.00	0.17	0.036	(0.520)	0.032	0.004
37	3.08	0.17	0.036	(0.518)	0.032	0.004
38	3.17	0.17	0.036	(0.516)	0.032	0.004
39	3.25	0.17	0.036	(0.513)	0.032	0.004
40	3.33	0.17	0.036	(0.511)	0.032	0.004
41	3.42	0.17	0.036	(0.509)	0.032	0.004
42	3.50	0.17	0.036	(0.507)	0.032	0.004
43	3.58	0.17	0.036	(0.505)	0.032	0.004
44	3.67	0.17	0.036	(0.503)	0.032	0.004
45	3.75	0.17	0.036	(0.501)	0.032	0.004
46	3.83	0.20	0.043	(0.499)	0.039	0.004
47	3.92	0.20	0.043	(0.497)	0.039	0.004
48	4.00	0.20	0.043	(0.494)	0.039	0.004
49	4.08	0.20	0.043	(0.492)	0.039	0.004
50	4.17	0.20	0.043	(0.490)	0.039	0.004
51	4.25	0.20	0.043	(0.488)	0.039	0.004
52	4.33	0.23	0.050	(0.486)	0.045	0.005
53	4.42	0.23	0.050	(0.484)	0.045	0.005
54	4.50	0.23	0.050	(0.482)	0.045	0.005
55	4.58	0.23	0.050	(0.480)	0.045	0.005
56	4.67	0.23	0.050	(0.478)	0.045	0.005
57	4.75	0.23	0.050	(0.476)	0.045	0.005
58	4.83	0.27	0.058	(0.474)	0.052	0.006
59	4.92	0.27	0.058	(0.472)	0.052	0.006
60	5.00	0.27	0.058	(0.470)	0.052	0.006
61	5.08	0.20	0.043	(0.468)	0.039	0.004
62	5.17	0.20	0.043	(0.465)	0.039	0.004
63	5.25	0.20	0.043	(0.463)	0.039	0.004
64	5.33	0.23	0.050	(0.461)	0.045	0.005
65	5.42	0.23	0.050	(0.459)	0.045	0.005
66	5.50	0.23	0.050	(0.457)	0.045	0.005
67	5.58	0.27	0.058	(0.455)	0.052	0.006
68	5.67	0.27	0.058	(0.453)	0.052	0.006
69	5.75	0.27	0.058	(0.451)	0.052	0.006
70	5.83	0.27	0.058	(0.449)	0.052	0.006
71	5.92	0.27	0.058	(0.447)	0.052	0.006
72	6.00	0.27	0.058	(0.445)	0.052	0.006
73	6.08	0.30	0.065	(0.443)	0.058	0.006
74	6.17	0.30	0.065	(0.441)	0.058	0.006
75	6.25	0.30	0.065	(0.440)	0.058	0.006
76	6.33	0.30	0.065	(0.438)	0.058	0.006
77	6.42	0.30	0.065	(0.436)	0.058	0.006
78	6.50	0.30	0.065	(0.434)	0.058	0.006
79	6.58	0.33	0.072	(0.432)	0.065	0.007
80	6.67	0.33	0.072	(0.430)	0.065	0.007
81	6.75	0.33	0.072	(0.428)	0.065	0.007
82	6.83	0.33	0.072	(0.426)	0.065	0.007
83	6.92	0.33	0.072	(0.424)	0.065	0.007
84	7.00	0.33	0.072	(0.422)	0.065	0.007
85	7.08	0.33	0.072	(0.420)	0.065	0.007
86	7.17	0.33	0.072	(0.418)	0.065	0.007
87	7.25	0.33	0.072	(0.416)	0.065	0.007

88	7.33	0.37	0.079	(0.414)	0.071	0.008
89	7.42	0.37	0.079	(0.412)	0.071	0.008
90	7.50	0.37	0.079	(0.411)	0.071	0.008
91	7.58	0.40	0.086	(0.409)	0.078	0.009
92	7.67	0.40	0.086	(0.407)	0.078	0.009
93	7.75	0.40	0.086	(0.405)	0.078	0.009
94	7.83	0.43	0.094	(0.403)	0.084	0.009
95	7.92	0.43	0.094	(0.401)	0.084	0.009
96	8.00	0.43	0.094	(0.399)	0.084	0.009
97	8.08	0.50	0.108	(0.398)	0.097	0.011
98	8.17	0.50	0.108	(0.396)	0.097	0.011
99	8.25	0.50	0.108	(0.394)	0.097	0.011
100	8.33	0.50	0.108	(0.392)	0.097	0.011
101	8.42	0.50	0.108	(0.390)	0.097	0.011
102	8.50	0.50	0.108	(0.388)	0.097	0.011
103	8.58	0.53	0.115	(0.386)	0.104	0.012
104	8.67	0.53	0.115	(0.385)	0.104	0.012
105	8.75	0.53	0.115	(0.383)	0.104	0.012
106	8.83	0.57	0.122	(0.381)	0.110	0.012
107	8.92	0.57	0.122	(0.379)	0.110	0.012
108	9.00	0.57	0.122	(0.377)	0.110	0.012
109	9.08	0.63	0.137	(0.376)	0.123	0.014
110	9.17	0.63	0.137	(0.374)	0.123	0.014
111	9.25	0.63	0.137	(0.372)	0.123	0.014
112	9.33	0.67	0.144	(0.370)	0.130	0.014
113	9.42	0.67	0.144	(0.369)	0.130	0.014
114	9.50	0.67	0.144	(0.367)	0.130	0.014
115	9.58	0.70	0.151	(0.365)	0.136	0.015
116	9.67	0.70	0.151	(0.363)	0.136	0.015
117	9.75	0.70	0.151	(0.362)	0.136	0.015
118	9.83	0.73	0.158	(0.360)	0.143	0.016
119	9.92	0.73	0.158	(0.358)	0.143	0.016
120	10.00	0.73	0.158	(0.356)	0.143	0.016
121	10.08	0.50	0.108	(0.355)	0.097	0.011
122	10.17	0.50	0.108	(0.353)	0.097	0.011
123	10.25	0.50	0.108	(0.351)	0.097	0.011
124	10.33	0.50	0.108	(0.349)	0.097	0.011
125	10.42	0.50	0.108	(0.348)	0.097	0.011
126	10.50	0.50	0.108	(0.346)	0.097	0.011
127	10.58	0.67	0.144	(0.344)	0.130	0.014
128	10.67	0.67	0.144	(0.343)	0.130	0.014
129	10.75	0.67	0.144	(0.341)	0.130	0.014
130	10.83	0.67	0.144	(0.339)	0.130	0.014
131	10.92	0.67	0.144	(0.338)	0.130	0.014
132	11.00	0.67	0.144	(0.336)	0.130	0.014
133	11.08	0.63	0.137	(0.334)	0.123	0.014
134	11.17	0.63	0.137	(0.333)	0.123	0.014
135	11.25	0.63	0.137	(0.331)	0.123	0.014
136	11.33	0.63	0.137	(0.329)	0.123	0.014
137	11.42	0.63	0.137	(0.328)	0.123	0.014
138	11.50	0.63	0.137	(0.326)	0.123	0.014
139	11.58	0.57	0.122	(0.325)	0.110	0.012
140	11.67	0.57	0.122	(0.323)	0.110	0.012
141	11.75	0.57	0.122	(0.321)	0.110	0.012
142	11.83	0.60	0.130	(0.320)	0.117	0.013
143	11.92	0.60	0.130	(0.318)	0.117	0.013
144	12.00	0.60	0.130	(0.317)	0.117	0.013
145	12.08	0.83	0.180	(0.315)	0.162	0.018
146	12.17	0.83	0.180	(0.313)	0.162	0.018
147	12.25	0.83	0.180	(0.312)	0.162	0.018
148	12.33	0.87	0.187	(0.310)	0.168	0.019
149	12.42	0.87	0.187	(0.309)	0.168	0.019
150	12.50	0.87	0.187	(0.307)	0.168	0.019

151	12.58	0.93	0.202	(0.306)	0.181	0.020
152	12.67	0.93	0.202	(0.304)	0.181	0.020
153	12.75	0.93	0.202	(0.303)	0.181	0.020
154	12.83	0.97	0.209	(0.301)	0.188	0.021
155	12.92	0.97	0.209	(0.300)	0.188	0.021
156	13.00	0.97	0.209	(0.298)	0.188	0.021
157	13.08	1.13	0.245	(0.296)	0.220	0.024
158	13.17	1.13	0.245	(0.295)	0.220	0.024
159	13.25	1.13	0.245	(0.293)	0.220	0.024
160	13.33	1.13	0.245	(0.292)	0.220	0.024
161	13.42	1.13	0.245	(0.291)	0.220	0.024
162	13.50	1.13	0.245	(0.289)	0.220	0.024
163	13.58	0.77	0.166	(0.288)	0.149	0.017
164	13.67	0.77	0.166	(0.286)	0.149	0.017
165	13.75	0.77	0.166	(0.285)	0.149	0.017
166	13.83	0.77	0.166	(0.283)	0.149	0.017
167	13.92	0.77	0.166	(0.282)	0.149	0.017
168	14.00	0.77	0.166	(0.280)	0.149	0.017
169	14.08	0.90	0.194	(0.279)	0.175	0.019
170	14.17	0.90	0.194	(0.277)	0.175	0.019
171	14.25	0.90	0.194	(0.276)	0.175	0.019
172	14.33	0.87	0.187	(0.275)	0.168	0.019
173	14.42	0.87	0.187	(0.273)	0.168	0.019
174	14.50	0.87	0.187	(0.272)	0.168	0.019
175	14.58	0.87	0.187	(0.270)	0.168	0.019
176	14.67	0.87	0.187	(0.269)	0.168	0.019
177	14.75	0.87	0.187	(0.268)	0.168	0.019
178	14.83	0.83	0.180	(0.266)	0.162	0.018
179	14.92	0.83	0.180	(0.265)	0.162	0.018
180	15.00	0.83	0.180	(0.264)	0.162	0.018
181	15.08	0.80	0.173	(0.262)	0.156	0.017
182	15.17	0.80	0.173	(0.261)	0.156	0.017
183	15.25	0.80	0.173	(0.260)	0.156	0.017
184	15.33	0.77	0.166	(0.258)	0.149	0.017
185	15.42	0.77	0.166	(0.257)	0.149	0.017
186	15.50	0.77	0.166	(0.256)	0.149	0.017
187	15.58	0.63	0.137	(0.254)	0.123	0.014
188	15.67	0.63	0.137	(0.253)	0.123	0.014
189	15.75	0.63	0.137	(0.252)	0.123	0.014
190	15.83	0.63	0.137	(0.250)	0.123	0.014
191	15.92	0.63	0.137	(0.249)	0.123	0.014
192	16.00	0.63	0.137	(0.248)	0.123	0.014
193	16.08	0.13	0.029	(0.247)	0.026	0.003
194	16.17	0.13	0.029	(0.245)	0.026	0.003
195	16.25	0.13	0.029	(0.244)	0.026	0.003
196	16.33	0.13	0.029	(0.243)	0.026	0.003
197	16.42	0.13	0.029	(0.242)	0.026	0.003
198	16.50	0.13	0.029	(0.240)	0.026	0.003
199	16.58	0.10	0.022	(0.239)	0.019	0.002
200	16.67	0.10	0.022	(0.238)	0.019	0.002
201	16.75	0.10	0.022	(0.237)	0.019	0.002
202	16.83	0.10	0.022	(0.235)	0.019	0.002
203	16.92	0.10	0.022	(0.234)	0.019	0.002
204	17.00	0.10	0.022	(0.233)	0.019	0.002
205	17.08	0.17	0.036	(0.232)	0.032	0.004
206	17.17	0.17	0.036	(0.231)	0.032	0.004
207	17.25	0.17	0.036	(0.230)	0.032	0.004
208	17.33	0.17	0.036	(0.228)	0.032	0.004
209	17.42	0.17	0.036	(0.227)	0.032	0.004
210	17.50	0.17	0.036	(0.226)	0.032	0.004
211	17.58	0.17	0.036	(0.225)	0.032	0.004
212	17.67	0.17	0.036	(0.224)	0.032	0.004
213	17.75	0.17	0.036	(0.223)	0.032	0.004

214	17.83	0.13	0.029	(0.222)	0.026	0.003
215	17.92	0.13	0.029	(0.221)	0.026	0.003
216	18.00	0.13	0.029	(0.219)	0.026	0.003
217	18.08	0.13	0.029	(0.218)	0.026	0.003
218	18.17	0.13	0.029	(0.217)	0.026	0.003
219	18.25	0.13	0.029	(0.216)	0.026	0.003
220	18.33	0.13	0.029	(0.215)	0.026	0.003
221	18.42	0.13	0.029	(0.214)	0.026	0.003
222	18.50	0.13	0.029	(0.213)	0.026	0.003
223	18.58	0.10	0.022	(0.212)	0.019	0.002
224	18.67	0.10	0.022	(0.211)	0.019	0.002
225	18.75	0.10	0.022	(0.210)	0.019	0.002
226	18.83	0.07	0.014	(0.209)	0.013	0.001
227	18.92	0.07	0.014	(0.208)	0.013	0.001
228	19.00	0.07	0.014	(0.207)	0.013	0.001
229	19.08	0.10	0.022	(0.206)	0.019	0.002
230	19.17	0.10	0.022	(0.205)	0.019	0.002
231	19.25	0.10	0.022	(0.204)	0.019	0.002
232	19.33	0.13	0.029	(0.203)	0.026	0.003
233	19.42	0.13	0.029	(0.202)	0.026	0.003
234	19.50	0.13	0.029	(0.201)	0.026	0.003
235	19.58	0.10	0.022	(0.200)	0.019	0.002
236	19.67	0.10	0.022	(0.200)	0.019	0.002
237	19.75	0.10	0.022	(0.199)	0.019	0.002
238	19.83	0.07	0.014	(0.198)	0.013	0.001
239	19.92	0.07	0.014	(0.197)	0.013	0.001
240	20.00	0.07	0.014	(0.196)	0.013	0.001
241	20.08	0.10	0.022	(0.195)	0.019	0.002
242	20.17	0.10	0.022	(0.194)	0.019	0.002
243	20.25	0.10	0.022	(0.193)	0.019	0.002
244	20.33	0.10	0.022	(0.193)	0.019	0.002
245	20.42	0.10	0.022	(0.192)	0.019	0.002
246	20.50	0.10	0.022	(0.191)	0.019	0.002
247	20.58	0.10	0.022	(0.190)	0.019	0.002
248	20.67	0.10	0.022	(0.189)	0.019	0.002
249	20.75	0.10	0.022	(0.189)	0.019	0.002
250	20.83	0.07	0.014	(0.188)	0.013	0.001
251	20.92	0.07	0.014	(0.187)	0.013	0.001
252	21.00	0.07	0.014	(0.186)	0.013	0.001
253	21.08	0.10	0.022	(0.186)	0.019	0.002
254	21.17	0.10	0.022	(0.185)	0.019	0.002
255	21.25	0.10	0.022	(0.184)	0.019	0.002
256	21.33	0.07	0.014	(0.183)	0.013	0.001
257	21.42	0.07	0.014	(0.183)	0.013	0.001
258	21.50	0.07	0.014	(0.182)	0.013	0.001
259	21.58	0.10	0.022	(0.181)	0.019	0.002
260	21.67	0.10	0.022	(0.181)	0.019	0.002
261	21.75	0.10	0.022	(0.180)	0.019	0.002
262	21.83	0.07	0.014	(0.179)	0.013	0.001
263	21.92	0.07	0.014	(0.179)	0.013	0.001
264	22.00	0.07	0.014	(0.178)	0.013	0.001
265	22.08	0.10	0.022	(0.178)	0.019	0.002
266	22.17	0.10	0.022	(0.177)	0.019	0.002
267	22.25	0.10	0.022	(0.176)	0.019	0.002
268	22.33	0.07	0.014	(0.176)	0.013	0.001
269	22.42	0.07	0.014	(0.175)	0.013	0.001
270	22.50	0.07	0.014	(0.175)	0.013	0.001
271	22.58	0.07	0.014	(0.174)	0.013	0.001
272	22.67	0.07	0.014	(0.174)	0.013	0.001
273	22.75	0.07	0.014	(0.173)	0.013	0.001
274	22.83	0.07	0.014	(0.173)	0.013	0.001
275	22.92	0.07	0.014	(0.172)	0.013	0.001
276	23.00	0.07	0.014	(0.172)	0.013	0.001

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277  23.08     0.07      0.014       (  0.172)       0.013        0.001
278  23.17     0.07      0.014       (  0.171)       0.013        0.001
279  23.25     0.07      0.014       (  0.171)       0.013        0.001
280  23.33     0.07      0.014       (  0.171)       0.013        0.001
281  23.42     0.07      0.014       (  0.170)       0.013        0.001
282  23.50     0.07      0.014       (  0.170)       0.013        0.001
283  23.58     0.07      0.014       (  0.170)       0.013        0.001
284  23.67     0.07      0.014       (  0.169)       0.013        0.001
285  23.75     0.07      0.014       (  0.169)       0.013        0.001
286  23.83     0.07      0.014       (  0.169)       0.013        0.001
287  23.92     0.07      0.014       (  0.169)       0.013        0.001
288  24.00     0.07      0.014       (  0.169)       0.013        0.001
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     2.2
       Flood volume = Effective rainfall      0.18(In)
        times area       1.3(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
       Total soil loss =      1.62(In)
       Total soil loss =     0.173(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =         836.3 Cubic Feet
       Total soil loss =        7527.1 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      0.032(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q         |         |         |         |
   0+10       0.0000      0.00  Q         |         |         |         |
   0+15       0.0000      0.00  Q         |         |         |         |
   0+20       0.0001      0.00  Q         |         |         |         |
   0+25       0.0001      0.00  Q         |         |         |         |
   0+30       0.0001      0.00  Q         |         |         |         |
   0+35       0.0001      0.00  Q         |         |         |         |
   0+40       0.0001      0.00  Q         |         |         |         |
   0+45       0.0001      0.00  Q         |         |         |         |
   0+50       0.0002      0.00  Q         |         |         |         |
   0+55       0.0002      0.00  Q         |         |         |         |
   1+ 0       0.0002      0.00  Q         |         |         |         |
   1+ 5       0.0002      0.00  Q         |         |         |         |
   1+10       0.0003      0.00  Q         |         |         |         |
   1+15       0.0003      0.00  Q         |         |         |         |
   1+20       0.0003      0.00  Q         |         |         |         |
   1+25       0.0003      0.00  Q         |         |         |         |
   1+30       0.0003      0.00  Q         |         |         |         |
   1+35       0.0004      0.00  Q         |         |         |         |
   1+40       0.0004      0.00  Q         |         |         |         |
   1+45       0.0004      0.00  Q         |         |         |         |
   1+50       0.0004      0.00  Q         |         |         |         |
   1+55       0.0004      0.00  Q         |         |         |         |
   2+ 0       0.0005      0.00  Q         |         |         |         |
   2+ 5       0.0005      0.00  QV        |         |         |         |
   2+10       0.0005      0.00  QV        |         |         |         |
   2+15       0.0006      0.00  QV        |         |         |         |
   2+20       0.0006      0.00  QV        |         |         |         |
   2+25       0.0006      0.00  QV        |         |         |         |
   2+30       0.0006      0.00  QV        |         |         |         |
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2+35	0.0007	0.00	QV	|	|	|	|
2+40	0.0007	0.00	QV	|	|	|	|
2+45	0.0007	0.00	QV	|	|	|	|
2+50	0.0008	0.00	QV	|	|	|	|
2+55	0.0008	0.00	QV	|	|	|	|
3+ 0	0.0008	0.00	QV	|	|	|	|
3+ 5	0.0008	0.00	QV	|	|	|	|
3+10	0.0009	0.00	QV	|	|	|	|
3+15	0.0009	0.00	QV	|	|	|	|
3+20	0.0009	0.00	QV	|	|	|	|
3+25	0.0010	0.00	Q V	|	|	|	|
3+30	0.0010	0.00	Q V	|	|	|	|
3+35	0.0010	0.00	Q V	|	|	|	|
3+40	0.0011	0.00	Q V	|	|	|	|
3+45	0.0011	0.00	Q V	|	|	|	|
3+50	0.0011	0.01	Q V	|	|	|	|
3+55	0.0012	0.01	Q V	|	|	|	|
4+ 0	0.0012	0.01	Q V	|	|	|	|
4+ 5	0.0013	0.01	Q V	|	|	|	|
4+10	0.0013	0.01	Q V	|	|	|	|
4+15	0.0013	0.01	Q V	|	|	|	|
4+20	0.0014	0.01	Q V	|	|	|	|
4+25	0.0014	0.01	Q V	|	|	|	|
4+30	0.0015	0.01	Q V	|	|	|	|
4+35	0.0015	0.01	Q V	|	|	|	|
4+40	0.0016	0.01	Q V	|	|	|	|
4+45	0.0016	0.01	Q V	|	|	|	|
4+50	0.0017	0.01	Q V	|	|	|	|
4+55	0.0017	0.01	Q V	|	|	|	|
5+ 0	0.0018	0.01	Q V	|	|	|	|
5+ 5	0.0018	0.01	Q V	|	|	|	|
5+10	0.0018	0.01	Q V	|	|	|	|
5+15	0.0019	0.01	Q V	|	|	|	|
5+20	0.0019	0.01	Q V	|	|	|	|
5+25	0.0020	0.01	Q V	|	|	|	|
5+30	0.0020	0.01	Q V	|	|	|	|
5+35	0.0021	0.01	Q V	|	|	|	|
5+40	0.0021	0.01	Q V	|	|	|	|
5+45	0.0022	0.01	Q V	|	|	|	|
5+50	0.0022	0.01	Q V	|	|	|	|
5+55	0.0023	0.01	Q V	|	|	|	|
6+ 0	0.0023	0.01	Q V	|	|	|	|
6+ 5	0.0024	0.01	Q V	|	|	|	|
6+10	0.0024	0.01	Q V	|	|	|	|
6+15	0.0025	0.01	Q V	|	|	|	|
6+20	0.0025	0.01	Q V	|	|	|	|
6+25	0.0026	0.01	Q V	|	|	|	|
6+30	0.0027	0.01	Q V	|	|	|	|
6+35	0.0027	0.01	Q V	|	|	|	|
6+40	0.0028	0.01	Q V	|	|	|	|
6+45	0.0028	0.01	Q V	|	|	|	|
6+50	0.0029	0.01	Q V	|	|	|	|
6+55	0.0030	0.01	Q V	|	|	|	|
7+ 0	0.0030	0.01	Q V	|	|	|	|
7+ 5	0.0031	0.01	Q V	|	|	|	|
7+10	0.0032	0.01	Q V	|	|	|	|
7+15	0.0032	0.01	Q V	|	|	|	|
7+20	0.0033	0.01	Q V	|	|	|	|
7+25	0.0034	0.01	Q V	|	|	|	|
7+30	0.0034	0.01	Q V	|	|	|	|
7+35	0.0035	0.01	Q V	|	|	|	|
7+40	0.0036	0.01	Q V	|	|	|	|
7+45	0.0037	0.01	Q V	|	|	|	|

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 7+50       0.0037      0.01  Q      V  |          |          |          |
 7+55       0.0038      0.01  Q      V  |          |          |          |
 8+ 0       0.0039      0.01  Q       V |          |          |          |
 8+ 5       0.0040      0.01  Q       V |          |          |          |
 8+10       0.0041      0.01  Q       V |          |          |          |
 8+15       0.0042      0.01  Q       V |          |          |          |
 8+20       0.0043      0.01  Q       V |          |          |          |
 8+25       0.0044      0.01  Q        V|          |          |          |
 8+30       0.0045      0.01  Q        V|          |          |          |
 8+35       0.0046      0.01  Q        V|          |          |          |
 8+40       0.0047      0.01  Q        V|          |          |          |
 8+45       0.0048      0.01  Q        V|          |          |          |
 8+50       0.0049      0.02  Q         V          |          |          |
 8+55       0.0050      0.02  Q         V          |          |          |
 9+ 0       0.0051      0.02  Q         V          |          |          |
 9+ 5       0.0052      0.02  Q         V          |          |          |
 9+10       0.0054      0.02  Q         |V         |          |          |
 9+15       0.0055      0.02  Q         |V         |          |          |
 9+20       0.0056      0.02  Q         |V         |          |          |
 9+25       0.0057      0.02  Q         |V         |          |          |
 9+30       0.0059      0.02  Q         | V        |          |          |
 9+35       0.0060      0.02  Q         | V        |          |          |
 9+40       0.0061      0.02  Q         | V        |          |          |
 9+45       0.0063      0.02  Q         |  V       |          |          |
 9+50       0.0064      0.02  Q         |  V       |          |          |
 9+55       0.0065      0.02  Q         |  V       |          |          |
10+ 0       0.0067      0.02  Q         |  V       |          |          |
10+ 5       0.0068      0.02  Q         |   V      |          |          |
10+10       0.0069      0.01  Q         |   V      |          |          |
10+15       0.0070      0.01  Q         |   V      |          |          |
10+20       0.0071      0.01  Q         |   V      |          |          |
10+25       0.0072      0.01  Q         |   V      |          |          |
10+30       0.0073      0.01  Q         |    V     |          |          |
10+35       0.0074      0.02  Q         |    V     |          |          |
10+40       0.0075      0.02  Q         |    V     |          |          |
10+45       0.0076      0.02  Q         |    V     |          |          |
10+50       0.0078      0.02  Q         |     V    |          |          |
10+55       0.0079      0.02  Q         |     V    |          |          |
11+ 0       0.0080      0.02  Q         |     V    |          |          |
11+ 5       0.0082      0.02  Q         |     V    |          |          |
11+10       0.0083      0.02  Q         |      V   |          |          |
11+15       0.0084      0.02  Q         |      V   |          |          |
11+20       0.0085      0.02  Q         |      V   |          |          |
11+25       0.0086      0.02  Q         |       V  |          |          |
11+30       0.0088      0.02  Q         |       V  |          |          |
11+35       0.0089      0.02  Q         |       V  |          |          |
11+40       0.0090      0.02  Q         |       V  |          |          |
11+45       0.0091      0.02  Q         |       V  |          |          |
11+50       0.0092      0.02  Q         |        V |          |          |
11+55       0.0093      0.02  Q         |        V |          |          |
12+ 0       0.0094      0.02  Q         |        V |          |          |
12+ 5       0.0096      0.02  Q         |        V |          |          |
12+10       0.0097      0.02  Q         |         V          |          |
12+15       0.0099      0.02  Q         |         V          |          |
12+20       0.0101      0.02  Q         |         V          |          |
12+25       0.0102      0.02  Q         |         |V         |          |
12+30       0.0104      0.02  Q         |         |V         |          |
12+35       0.0106      0.03  Q         |         | V        |          |
12+40       0.0108      0.03  Q         |         | V        |          |
12+45       0.0109      0.03  Q         |         | V        |          |
12+50       0.0111      0.03  Q         |         |  V       |          |
12+55       0.0113      0.03  Q         |         |  V       |          |
13+ 0       0.0115      0.03  Q         |         |  V       |          |
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13+ 5	0.0117	0.03	Q	|	|	V |	|
13+10	0.0119	0.03	Q	|	|	V |	|
13+15	0.0121	0.03	Q	|	|	V |	|
13+20	0.0124	0.03	Q	|	|	V |	|
13+25	0.0126	0.03	Q	|	|	V |	|
13+30	0.0128	0.03	Q	|	|	V |	|
13+35	0.0130	0.02	Q	|	|	V |	|
13+40	0.0131	0.02	Q	|	|	V |	|
13+45	0.0132	0.02	Q	|	|	V |	|
13+50	0.0134	0.02	Q	|	|	V |	|
13+55	0.0135	0.02	Q	|	|	V |	|
14+ 0	0.0137	0.02	Q	|	|	V |	|
14+ 5	0.0139	0.02	Q	|	|	V |	|
14+10	0.0140	0.03	Q	|	|	V|	|
14+15	0.0142	0.03	Q	|	|	V|	|
14+20	0.0144	0.02	Q	|	|	V|	|
14+25	0.0145	0.02	Q	|	|	V	|
14+30	0.0147	0.02	Q	|	|	V	|
14+35	0.0149	0.02	Q	|	|	V	|
14+40	0.0150	0.02	Q	|	|	|V	|
14+45	0.0152	0.02	Q	|	|	|V	|
14+50	0.0154	0.02	Q	|	|	| V	|
14+55	0.0155	0.02	Q	|	|	| V	|
15+ 0	0.0157	0.02	Q	|	|	| V	|
15+ 5	0.0158	0.02	Q	|	|	| V	|
15+10	0.0160	0.02	Q	|	|	| V	|
15+15	0.0161	0.02	Q	|	|	| V	|
15+20	0.0163	0.02	Q	|	|	| V	|
15+25	0.0164	0.02	Q	|	|	| V	|
15+30	0.0166	0.02	Q	|	|	| V	|
15+35	0.0167	0.02	Q	|	|	| V	|
15+40	0.0168	0.02	Q	|	|	| V	|
15+45	0.0170	0.02	Q	|	|	| V	|
15+50	0.0171	0.02	Q	|	|	| V	|
15+55	0.0172	0.02	Q	|	|	| V	|
16+ 0	0.0173	0.02	Q	|	|	| V	|
16+ 5	0.0174	0.01	Q	|	|	| V	|
16+10	0.0174	0.00	Q	|	|	| V	|
16+15	0.0174	0.00	Q	|	|	| V	|
16+20	0.0175	0.00	Q	|	|	| V	|
16+25	0.0175	0.00	Q	|	|	| V	|
16+30	0.0175	0.00	Q	|	|	| V	|
16+35	0.0175	0.00	Q	|	|	| V	|
16+40	0.0175	0.00	Q	|	|	| V	|
16+45	0.0176	0.00	Q	|	|	| V	|
16+50	0.0176	0.00	Q	|	|	| V	|
16+55	0.0176	0.00	Q	|	|	| V	|
17+ 0	0.0176	0.00	Q	|	|	| V	|
17+ 5	0.0176	0.00	Q	|	|	| V	|
17+10	0.0177	0.00	Q	|	|	| V	|
17+15	0.0177	0.00	Q	|	|	| V	|
17+20	0.0177	0.00	Q	|	|	| V	|
17+25	0.0178	0.00	Q	|	|	| V	|
17+30	0.0178	0.00	Q	|	|	| V	|
17+35	0.0178	0.00	Q	|	|	| V	|
17+40	0.0179	0.00	Q	|	|	| V	|
17+45	0.0179	0.00	Q	|	|	| V	|
17+50	0.0179	0.00	Q	|	|	| V	|
17+55	0.0180	0.00	Q	|	|	| V	|
18+ 0	0.0180	0.00	Q	|	|	| V	|
18+ 5	0.0180	0.00	Q	|	|	| V	|
18+10	0.0180	0.00	Q	|	|	| V	|
18+15	0.0181	0.00	Q	|	|	| V	|

18+20	0.0181	0.00	Q	|	|	|	V |
18+25	0.0181	0.00	Q	|	|	|	V |
18+30	0.0181	0.00	Q	|	|	|	V |
18+35	0.0182	0.00	Q	|	|	|	V |
18+40	0.0182	0.00	Q	|	|	|	V |
18+45	0.0182	0.00	Q	|	|	|	V |
18+50	0.0182	0.00	Q	|	|	|	V |
18+55	0.0182	0.00	Q	|	|	|	V |
19+ 0	0.0182	0.00	Q	|	|	|	V |
19+ 5	0.0183	0.00	Q	|	|	|	V |
19+10	0.0183	0.00	Q	|	|	|	V |
19+15	0.0183	0.00	Q	|	|	|	V |
19+20	0.0183	0.00	Q	|	|	|	V |
19+25	0.0183	0.00	Q	|	|	|	V |
19+30	0.0184	0.00	Q	|	|	|	V |
19+35	0.0184	0.00	Q	|	|	|	V |
19+40	0.0184	0.00	Q	|	|	|	V |
19+45	0.0184	0.00	Q	|	|	|	V |
19+50	0.0184	0.00	Q	|	|	|	V |
19+55	0.0185	0.00	Q	|	|	|	V |
20+ 0	0.0185	0.00	Q	|	|	|	V |
20+ 5	0.0185	0.00	Q	|	|	|	V |
20+10	0.0185	0.00	Q	|	|	|	V |
20+15	0.0185	0.00	Q	|	|	|	V |
20+20	0.0185	0.00	Q	|	|	|	V |
20+25	0.0186	0.00	Q	|	|	|	V |
20+30	0.0186	0.00	Q	|	|	|	V |
20+35	0.0186	0.00	Q	|	|	|	V |
20+40	0.0186	0.00	Q	|	|	|	V |
20+45	0.0186	0.00	Q	|	|	|	V |
20+50	0.0187	0.00	Q	|	|	|	V |
20+55	0.0187	0.00	Q	|	|	|	V |
21+ 0	0.0187	0.00	Q	|	|	|	V |
21+ 5	0.0187	0.00	Q	|	|	|	V |
21+10	0.0187	0.00	Q	|	|	|	V |
21+15	0.0187	0.00	Q	|	|	|	V|
21+20	0.0187	0.00	Q	|	|	|	V|
21+25	0.0188	0.00	Q	|	|	|	V|
21+30	0.0188	0.00	Q	|	|	|	V|
21+35	0.0188	0.00	Q	|	|	|	V|
21+40	0.0188	0.00	Q	|	|	|	V|
21+45	0.0188	0.00	Q	|	|	|	V|
21+50	0.0188	0.00	Q	|	|	|	V|
21+55	0.0189	0.00	Q	|	|	|	V|
22+ 0	0.0189	0.00	Q	|	|	|	V|
22+ 5	0.0189	0.00	Q	|	|	|	V|
22+10	0.0189	0.00	Q	|	|	|	V|
22+15	0.0189	0.00	Q	|	|	|	V|
22+20	0.0189	0.00	Q	|	|	|	V|
22+25	0.0190	0.00	Q	|	|	|	V|
22+30	0.0190	0.00	Q	|	|	|	V|
22+35	0.0190	0.00	Q	|	|	|	V|
22+40	0.0190	0.00	Q	|	|	|	V|
22+45	0.0190	0.00	Q	|	|	|	V|
22+50	0.0190	0.00	Q	|	|	|	V|
22+55	0.0190	0.00	Q	|	|	|	V|
23+ 0	0.0190	0.00	Q	|	|	|	V|
23+ 5	0.0191	0.00	Q	|	|	|	V|
23+10	0.0191	0.00	Q	|	|	|	V|
23+15	0.0191	0.00	Q	|	|	|	V|
23+20	0.0191	0.00	Q	|	|	|	V|
23+25	0.0191	0.00	Q	|	|	|	V|
23+30	0.0191	0.00	Q	|	|	|	V|

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   23+35       0.0191      0.00  Q         |         |         |        V|
   23+40       0.0191      0.00  Q         |         |         |        V|
   23+45       0.0192      0.00  Q         |         |         |        V|
   23+50       0.0192      0.00  Q         |         |         |        V|
   23+55       0.0192      0.00  Q         |         |         |        V|
   24+ 0       0.0192      0.00  Q         |         |         |        V|
   24+ 5       0.0192      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

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Study date 12/12/24 File: TCPE2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
OFFSITE AREA "E" PROPOSED CONDITION
10-YEAR
24-HOUR

Drainage Area = 1.28(Ac.) = 0.002 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1.28(Ac.) = 0.002 Sq. Mi.
Length along longest watercourse = 276.00(Ft.)
Length along longest watercourse measured to centroid = 138.00(Ft.)
Length along longest watercourse = 0.052 Mi.
Length along longest watercourse measured to centroid = 0.026 Mi.
Difference in elevation = 88.10(Ft.)
Slope along watercourse = 1685.3913 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.014 Hr.
Lag time = 0.86 Min.
25% of lag time = 0.21 Min.
40% of lag time = 0.34 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
1.28	1.80	2.30

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
1.28	4.50	5.76

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.280	86.30	0.000

Total Area Entered = 1.28(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
86.3	86.3	0.172	0.000	0.172	1.000	0.172
					Sum (F) =	0.172

Area averaged mean soil loss (F) (In/Hr) = 0.172
Minimum soil loss rate ((In/Hr)) = 0.086
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

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

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	582.186	74.559	0.962
2	0.167	1164.372	25.441	0.328
		Sum = 100.000	Sum=	1.290

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.305)	0.021	0.002
2	0.17	0.07	0.023	(0.304)	0.021	0.002
3	0.25	0.07	0.023	(0.303)	0.021	0.002
4	0.33	0.10	0.035	(0.302)	0.031	0.003
5	0.42	0.10	0.035	(0.301)	0.031	0.003
6	0.50	0.10	0.035	(0.299)	0.031	0.003
7	0.58	0.10	0.035	(0.298)	0.031	0.003
8	0.67	0.10	0.035	(0.297)	0.031	0.003
9	0.75	0.10	0.035	(0.296)	0.031	0.003
10	0.83	0.13	0.047	(0.295)	0.042	0.005
11	0.92	0.13	0.047	(0.294)	0.042	0.005
12	1.00	0.13	0.047	(0.292)	0.042	0.005
13	1.08	0.10	0.035	(0.291)	0.031	0.003
14	1.17	0.10	0.035	(0.290)	0.031	0.003
15	1.25	0.10	0.035	(0.289)	0.031	0.003
16	1.33	0.10	0.035	(0.288)	0.031	0.003
17	1.42	0.10	0.035	(0.287)	0.031	0.003
18	1.50	0.10	0.035	(0.285)	0.031	0.003
19	1.58	0.10	0.035	(0.284)	0.031	0.003
20	1.67	0.10	0.035	(0.283)	0.031	0.003
21	1.75	0.10	0.035	(0.282)	0.031	0.003
22	1.83	0.13	0.047	(0.281)	0.042	0.005
23	1.92	0.13	0.047	(0.280)	0.042	0.005
24	2.00	0.13	0.047	(0.279)	0.042	0.005

25	2.08	0.13	0.047	(0.278)	0.042	0.005
26	2.17	0.13	0.047	(0.276)	0.042	0.005
27	2.25	0.13	0.047	(0.275)	0.042	0.005
28	2.33	0.13	0.047	(0.274)	0.042	0.005
29	2.42	0.13	0.047	(0.273)	0.042	0.005
30	2.50	0.13	0.047	(0.272)	0.042	0.005
31	2.58	0.17	0.058	(0.271)	0.052	0.006
32	2.67	0.17	0.058	(0.270)	0.052	0.006
33	2.75	0.17	0.058	(0.269)	0.052	0.006
34	2.83	0.17	0.058	(0.267)	0.052	0.006
35	2.92	0.17	0.058	(0.266)	0.052	0.006
36	3.00	0.17	0.058	(0.265)	0.052	0.006
37	3.08	0.17	0.058	(0.264)	0.052	0.006
38	3.17	0.17	0.058	(0.263)	0.052	0.006
39	3.25	0.17	0.058	(0.262)	0.052	0.006
40	3.33	0.17	0.058	(0.261)	0.052	0.006
41	3.42	0.17	0.058	(0.260)	0.052	0.006
42	3.50	0.17	0.058	(0.259)	0.052	0.006
43	3.58	0.17	0.058	(0.258)	0.052	0.006
44	3.67	0.17	0.058	(0.257)	0.052	0.006
45	3.75	0.17	0.058	(0.255)	0.052	0.006
46	3.83	0.20	0.070	(0.254)	0.063	0.007
47	3.92	0.20	0.070	(0.253)	0.063	0.007
48	4.00	0.20	0.070	(0.252)	0.063	0.007
49	4.08	0.20	0.070	(0.251)	0.063	0.007
50	4.17	0.20	0.070	(0.250)	0.063	0.007
51	4.25	0.20	0.070	(0.249)	0.063	0.007
52	4.33	0.23	0.082	(0.248)	0.073	0.008
53	4.42	0.23	0.082	(0.247)	0.073	0.008
54	4.50	0.23	0.082	(0.246)	0.073	0.008
55	4.58	0.23	0.082	(0.245)	0.073	0.008
56	4.67	0.23	0.082	(0.244)	0.073	0.008
57	4.75	0.23	0.082	(0.243)	0.073	0.008
58	4.83	0.27	0.093	(0.242)	0.084	0.009
59	4.92	0.27	0.093	(0.241)	0.084	0.009
60	5.00	0.27	0.093	(0.240)	0.084	0.009
61	5.08	0.20	0.070	(0.239)	0.063	0.007
62	5.17	0.20	0.070	(0.238)	0.063	0.007
63	5.25	0.20	0.070	(0.236)	0.063	0.007
64	5.33	0.23	0.082	(0.235)	0.073	0.008
65	5.42	0.23	0.082	(0.234)	0.073	0.008
66	5.50	0.23	0.082	(0.233)	0.073	0.008
67	5.58	0.27	0.093	(0.232)	0.084	0.009
68	5.67	0.27	0.093	(0.231)	0.084	0.009
69	5.75	0.27	0.093	(0.230)	0.084	0.009
70	5.83	0.27	0.093	(0.229)	0.084	0.009
71	5.92	0.27	0.093	(0.228)	0.084	0.009
72	6.00	0.27	0.093	(0.227)	0.084	0.009
73	6.08	0.30	0.105	(0.226)	0.094	0.010
74	6.17	0.30	0.105	(0.225)	0.094	0.010
75	6.25	0.30	0.105	(0.224)	0.094	0.010
76	6.33	0.30	0.105	(0.223)	0.094	0.010
77	6.42	0.30	0.105	(0.222)	0.094	0.010
78	6.50	0.30	0.105	(0.221)	0.094	0.010
79	6.58	0.33	0.116	(0.220)	0.105	0.012
80	6.67	0.33	0.116	(0.219)	0.105	0.012
81	6.75	0.33	0.116	(0.218)	0.105	0.012
82	6.83	0.33	0.116	(0.217)	0.105	0.012
83	6.92	0.33	0.116	(0.216)	0.105	0.012
84	7.00	0.33	0.116	(0.215)	0.105	0.012
85	7.08	0.33	0.116	(0.214)	0.105	0.012
86	7.17	0.33	0.116	(0.213)	0.105	0.012
87	7.25	0.33	0.116	(0.212)	0.105	0.012

88	7.33	0.37	0.128	(	0.211)	0.115		0.013
89	7.42	0.37	0.128	(	0.210)	0.115		0.013
90	7.50	0.37	0.128	(	0.210)	0.115		0.013
91	7.58	0.40	0.140	(	0.209)	0.126		0.014
92	7.67	0.40	0.140	(	0.208)	0.126		0.014
93	7.75	0.40	0.140	(	0.207)	0.126		0.014
94	7.83	0.43	0.151	(	0.206)	0.136		0.015
95	7.92	0.43	0.151	(	0.205)	0.136		0.015
96	8.00	0.43	0.151	(	0.204)	0.136		0.015
97	8.08	0.50	0.175	(	0.203)	0.157		0.017
98	8.17	0.50	0.175	(	0.202)	0.157		0.017
99	8.25	0.50	0.175	(	0.201)	0.157		0.017
100	8.33	0.50	0.175	(	0.200)	0.157		0.017
101	8.42	0.50	0.175	(	0.199)	0.157		0.017
102	8.50	0.50	0.175	(	0.198)	0.157		0.017
103	8.58	0.53	0.186	(	0.197)	0.168		0.019
104	8.67	0.53	0.186	(	0.196)	0.168		0.019
105	8.75	0.53	0.186	(	0.195)	0.168		0.019
106	8.83	0.57	0.198	(	0.194)	0.178		0.020
107	8.92	0.57	0.198	(	0.194)	0.178		0.020
108	9.00	0.57	0.198	(	0.193)	0.178		0.020
109	9.08	0.63	0.221		0.192	(	0.199)	0.030
110	9.17	0.63	0.221		0.191	(	0.199)	0.030
111	9.25	0.63	0.221		0.190	(	0.199)	0.031
112	9.33	0.67	0.233		0.189	(	0.210)	0.044
113	9.42	0.67	0.233		0.188	(	0.210)	0.045
114	9.50	0.67	0.233		0.187	(	0.210)	0.046
115	9.58	0.70	0.245		0.186	(	0.220)	0.058
116	9.67	0.70	0.245		0.185	(	0.220)	0.059
117	9.75	0.70	0.245		0.184	(	0.220)	0.060
118	9.83	0.73	0.256		0.184	(	0.231)	0.073
119	9.92	0.73	0.256		0.183	(	0.231)	0.073
120	10.00	0.73	0.256		0.182	(	0.231)	0.074
121	10.08	0.50	0.175	(	0.181)	0.157		0.017
122	10.17	0.50	0.175	(	0.180)	0.157		0.017
123	10.25	0.50	0.175	(	0.179)	0.157		0.017
124	10.33	0.50	0.175	(	0.178)	0.157		0.017
125	10.42	0.50	0.175	(	0.177)	0.157		0.017
126	10.50	0.50	0.175	(	0.177)	0.157		0.017
127	10.58	0.67	0.233		0.176	(	0.210)	0.057
128	10.67	0.67	0.233		0.175	(	0.210)	0.058
129	10.75	0.67	0.233		0.174	(	0.210)	0.059
130	10.83	0.67	0.233		0.173	(	0.210)	0.060
131	10.92	0.67	0.233		0.172	(	0.210)	0.061
132	11.00	0.67	0.233		0.171	(	0.210)	0.061
133	11.08	0.63	0.221		0.171	(	0.199)	0.051
134	11.17	0.63	0.221		0.170	(	0.199)	0.051
135	11.25	0.63	0.221		0.169	(	0.199)	0.052
136	11.33	0.63	0.221		0.168	(	0.199)	0.053
137	11.42	0.63	0.221		0.167	(	0.199)	0.054
138	11.50	0.63	0.221		0.166	(	0.199)	0.055
139	11.58	0.57	0.198		0.166	(	0.178)	0.032
140	11.67	0.57	0.198		0.165	(	0.178)	0.033
141	11.75	0.57	0.198		0.164	(	0.178)	0.034
142	11.83	0.60	0.210		0.163	(	0.189)	0.046
143	11.92	0.60	0.210		0.162	(	0.189)	0.047
144	12.00	0.60	0.210		0.162	(	0.189)	0.048
145	12.08	0.83	0.291		0.161	(	0.262)	0.130
146	12.17	0.83	0.291		0.160	(	0.262)	0.131
147	12.25	0.83	0.291		0.159	(	0.262)	0.132
148	12.33	0.87	0.303		0.158	(	0.272)	0.144
149	12.42	0.87	0.303		0.158	(	0.272)	0.145
150	12.50	0.87	0.303		0.157	(	0.272)	0.146

151	12.58	0.93	0.326	0.156	(0.293)	0.170
152	12.67	0.93	0.326	0.155	(0.293)	0.171
153	12.75	0.93	0.326	0.154	(0.293)	0.172
154	12.83	0.97	0.338	0.154	(0.304)	0.184
155	12.92	0.97	0.338	0.153	(0.304)	0.185
156	13.00	0.97	0.338	0.152	(0.304)	0.186
157	13.08	1.13	0.396	0.151	(0.356)	0.245
158	13.17	1.13	0.396	0.151	(0.356)	0.245
159	13.25	1.13	0.396	0.150	(0.356)	0.246
160	13.33	1.13	0.396	0.149	(0.356)	0.247
161	13.42	1.13	0.396	0.148	(0.356)	0.248
162	13.50	1.13	0.396	0.147	(0.356)	0.248
163	13.58	0.77	0.268	0.147	(0.241)	0.121
164	13.67	0.77	0.268	0.146	(0.241)	0.122
165	13.75	0.77	0.268	0.145	(0.241)	0.123
166	13.83	0.77	0.268	0.144	(0.241)	0.123
167	13.92	0.77	0.268	0.144	(0.241)	0.124
168	14.00	0.77	0.268	0.143	(0.241)	0.125
169	14.08	0.90	0.314	0.142	(0.283)	0.172
170	14.17	0.90	0.314	0.142	(0.283)	0.173
171	14.25	0.90	0.314	0.141	(0.283)	0.174
172	14.33	0.87	0.303	0.140	(0.272)	0.163
173	14.42	0.87	0.303	0.139	(0.272)	0.163
174	14.50	0.87	0.303	0.139	(0.272)	0.164
175	14.58	0.87	0.303	0.138	(0.272)	0.165
176	14.67	0.87	0.303	0.137	(0.272)	0.165
177	14.75	0.87	0.303	0.137	(0.272)	0.166
178	14.83	0.83	0.291	0.136	(0.262)	0.155
179	14.92	0.83	0.291	0.135	(0.262)	0.156
180	15.00	0.83	0.291	0.134	(0.262)	0.157
181	15.08	0.80	0.279	0.134	(0.251)	0.146
182	15.17	0.80	0.279	0.133	(0.251)	0.146
183	15.25	0.80	0.279	0.132	(0.251)	0.147
184	15.33	0.77	0.268	0.132	(0.241)	0.136
185	15.42	0.77	0.268	0.131	(0.241)	0.137
186	15.50	0.77	0.268	0.130	(0.241)	0.137
187	15.58	0.63	0.221	0.130	(0.199)	0.091
188	15.67	0.63	0.221	0.129	(0.199)	0.092
189	15.75	0.63	0.221	0.128	(0.199)	0.093
190	15.83	0.63	0.221	0.128	(0.199)	0.093
191	15.92	0.63	0.221	0.127	(0.199)	0.094
192	16.00	0.63	0.221	0.126	(0.199)	0.095
193	16.08	0.13	0.047	(0.126)	0.042	0.005
194	16.17	0.13	0.047	(0.125)	0.042	0.005
195	16.25	0.13	0.047	(0.125)	0.042	0.005
196	16.33	0.13	0.047	(0.124)	0.042	0.005
197	16.42	0.13	0.047	(0.123)	0.042	0.005
198	16.50	0.13	0.047	(0.123)	0.042	0.005
199	16.58	0.10	0.035	(0.122)	0.031	0.003
200	16.67	0.10	0.035	(0.121)	0.031	0.003
201	16.75	0.10	0.035	(0.121)	0.031	0.003
202	16.83	0.10	0.035	(0.120)	0.031	0.003
203	16.92	0.10	0.035	(0.120)	0.031	0.003
204	17.00	0.10	0.035	(0.119)	0.031	0.003
205	17.08	0.17	0.058	(0.118)	0.052	0.006
206	17.17	0.17	0.058	(0.118)	0.052	0.006
207	17.25	0.17	0.058	(0.117)	0.052	0.006
208	17.33	0.17	0.058	(0.117)	0.052	0.006
209	17.42	0.17	0.058	(0.116)	0.052	0.006
210	17.50	0.17	0.058	(0.115)	0.052	0.006
211	17.58	0.17	0.058	(0.115)	0.052	0.006
212	17.67	0.17	0.058	(0.114)	0.052	0.006
213	17.75	0.17	0.058	(0.114)	0.052	0.006

214	17.83	0.13	0.047	(0.113)	0.042	0.005
215	17.92	0.13	0.047	(0.113)	0.042	0.005
216	18.00	0.13	0.047	(0.112)	0.042	0.005
217	18.08	0.13	0.047	(0.111)	0.042	0.005
218	18.17	0.13	0.047	(0.111)	0.042	0.005
219	18.25	0.13	0.047	(0.110)	0.042	0.005
220	18.33	0.13	0.047	(0.110)	0.042	0.005
221	18.42	0.13	0.047	(0.109)	0.042	0.005
222	18.50	0.13	0.047	(0.109)	0.042	0.005
223	18.58	0.10	0.035	(0.108)	0.031	0.003
224	18.67	0.10	0.035	(0.108)	0.031	0.003
225	18.75	0.10	0.035	(0.107)	0.031	0.003
226	18.83	0.07	0.023	(0.107)	0.021	0.002
227	18.92	0.07	0.023	(0.106)	0.021	0.002
228	19.00	0.07	0.023	(0.106)	0.021	0.002
229	19.08	0.10	0.035	(0.105)	0.031	0.003
230	19.17	0.10	0.035	(0.105)	0.031	0.003
231	19.25	0.10	0.035	(0.104)	0.031	0.003
232	19.33	0.13	0.047	(0.104)	0.042	0.005
233	19.42	0.13	0.047	(0.103)	0.042	0.005
234	19.50	0.13	0.047	(0.103)	0.042	0.005
235	19.58	0.10	0.035	(0.102)	0.031	0.003
236	19.67	0.10	0.035	(0.102)	0.031	0.003
237	19.75	0.10	0.035	(0.101)	0.031	0.003
238	19.83	0.07	0.023	(0.101)	0.021	0.002
239	19.92	0.07	0.023	(0.100)	0.021	0.002
240	20.00	0.07	0.023	(0.100)	0.021	0.002
241	20.08	0.10	0.035	(0.100)	0.031	0.003
242	20.17	0.10	0.035	(0.099)	0.031	0.003
243	20.25	0.10	0.035	(0.099)	0.031	0.003
244	20.33	0.10	0.035	(0.098)	0.031	0.003
245	20.42	0.10	0.035	(0.098)	0.031	0.003
246	20.50	0.10	0.035	(0.097)	0.031	0.003
247	20.58	0.10	0.035	(0.097)	0.031	0.003
248	20.67	0.10	0.035	(0.097)	0.031	0.003
249	20.75	0.10	0.035	(0.096)	0.031	0.003
250	20.83	0.07	0.023	(0.096)	0.021	0.002
251	20.92	0.07	0.023	(0.095)	0.021	0.002
252	21.00	0.07	0.023	(0.095)	0.021	0.002
253	21.08	0.10	0.035	(0.095)	0.031	0.003
254	21.17	0.10	0.035	(0.094)	0.031	0.003
255	21.25	0.10	0.035	(0.094)	0.031	0.003
256	21.33	0.07	0.023	(0.094)	0.021	0.002
257	21.42	0.07	0.023	(0.093)	0.021	0.002
258	21.50	0.07	0.023	(0.093)	0.021	0.002
259	21.58	0.10	0.035	(0.093)	0.031	0.003
260	21.67	0.10	0.035	(0.092)	0.031	0.003
261	21.75	0.10	0.035	(0.092)	0.031	0.003
262	21.83	0.07	0.023	(0.092)	0.021	0.002
263	21.92	0.07	0.023	(0.091)	0.021	0.002
264	22.00	0.07	0.023	(0.091)	0.021	0.002
265	22.08	0.10	0.035	(0.091)	0.031	0.003
266	22.17	0.10	0.035	(0.090)	0.031	0.003
267	22.25	0.10	0.035	(0.090)	0.031	0.003
268	22.33	0.07	0.023	(0.090)	0.021	0.002
269	22.42	0.07	0.023	(0.089)	0.021	0.002
270	22.50	0.07	0.023	(0.089)	0.021	0.002
271	22.58	0.07	0.023	(0.089)	0.021	0.002
272	22.67	0.07	0.023	(0.089)	0.021	0.002
273	22.75	0.07	0.023	(0.088)	0.021	0.002
274	22.83	0.07	0.023	(0.088)	0.021	0.002
275	22.92	0.07	0.023	(0.088)	0.021	0.002
276	23.00	0.07	0.023	(0.088)	0.021	0.002

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277  23.08     0.07      0.023       (  0.088)       0.021        0.002
278  23.17     0.07      0.023       (  0.087)       0.021        0.002
279  23.25     0.07      0.023       (  0.087)       0.021        0.002
280  23.33     0.07      0.023       (  0.087)       0.021        0.002
281  23.42     0.07      0.023       (  0.087)       0.021        0.002
282  23.50     0.07      0.023       (  0.087)       0.021        0.002
283  23.58     0.07      0.023       (  0.087)       0.021        0.002
284  23.67     0.07      0.023       (  0.086)       0.021        0.002
285  23.75     0.07      0.023       (  0.086)       0.021        0.002
286  23.83     0.07      0.023       (  0.086)       0.021        0.002
287  23.92     0.07      0.023       (  0.086)       0.021        0.002
288  24.00     0.07      0.023       (  0.086)       0.021        0.002
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    10.4
       Flood volume = Effective rainfall      0.87(In)
        times area       1.3(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
       Total soil loss =      2.04(In)
       Total soil loss =     0.218(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =        4029.1 Cubic Feet
       Total soil loss =        9495.6 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      0.320(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q         |         |         |         |
   0+10       0.0000      0.00  Q         |         |         |         |
   0+15       0.0001      0.00  Q         |         |         |         |
   0+20       0.0001      0.00  Q         |         |         |         |
   0+25       0.0001      0.00  Q         |         |         |         |
   0+30       0.0001      0.00  Q         |         |         |         |
   0+35       0.0002      0.00  Q         |         |         |         |
   0+40       0.0002      0.00  Q         |         |         |         |
   0+45       0.0002      0.00  Q         |         |         |         |
   0+50       0.0003      0.01  Q         |         |         |         |
   0+55       0.0003      0.01  Q         |         |         |         |
   1+ 0       0.0004      0.01  Q         |         |         |         |
   1+ 5       0.0004      0.00  Q         |         |         |         |
   1+10       0.0004      0.00  Q         |         |         |         |
   1+15       0.0005      0.00  Q         |         |         |         |
   1+20       0.0005      0.00  Q         |         |         |         |
   1+25       0.0005      0.00  Q         |         |         |         |
   1+30       0.0006      0.00  Q         |         |         |         |
   1+35       0.0006      0.00  Q         |         |         |         |
   1+40       0.0006      0.00  Q         |         |         |         |
   1+45       0.0006      0.00  Q         |         |         |         |
   1+50       0.0007      0.01  Q         |         |         |         |
   1+55       0.0007      0.01  Q         |         |         |         |
   2+ 0       0.0008      0.01  Q         |         |         |         |
   2+ 5       0.0008      0.01  Q         |         |         |         |
   2+10       0.0008      0.01  Q         |         |         |         |
   2+15       0.0009      0.01  Q         |         |         |         |
   2+20       0.0009      0.01  Q         |         |         |         |
   2+25       0.0010      0.01  Q         |         |         |         |
   2+30       0.0010      0.01  Q         |         |         |         |
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2+35	0.0011	0.01	Q				
2+40	0.0011	0.01	Q				
2+45	0.0012	0.01	Q				
2+50	0.0012	0.01	Q				
2+55	0.0013	0.01	Q				
3+ 0	0.0013	0.01	Q				
3+ 5	0.0014	0.01	Q				
3+10	0.0014	0.01	Q				
3+15	0.0015	0.01	Q				
3+20	0.0015	0.01	Q				
3+25	0.0016	0.01	Q				
3+30	0.0016	0.01	Q				
3+35	0.0017	0.01	Q				
3+40	0.0017	0.01	Q				
3+45	0.0018	0.01	Q				
3+50	0.0018	0.01	Q				
3+55	0.0019	0.01	Q				
4+ 0	0.0020	0.01	Q				
4+ 5	0.0020	0.01	Q				
4+10	0.0021	0.01	Q				
4+15	0.0022	0.01	Q				
4+20	0.0022	0.01	Q				
4+25	0.0023	0.01	Q				
4+30	0.0024	0.01	QV				
4+35	0.0024	0.01	QV				
4+40	0.0025	0.01	QV				
4+45	0.0026	0.01	QV				
4+50	0.0027	0.01	QV				
4+55	0.0028	0.01	QV				
5+ 0	0.0028	0.01	QV				
5+ 5	0.0029	0.01	QV				
5+10	0.0030	0.01	QV				
5+15	0.0030	0.01	QV				
5+20	0.0031	0.01	QV				
5+25	0.0032	0.01	QV				
5+30	0.0032	0.01	QV				
5+35	0.0033	0.01	QV				
5+40	0.0034	0.01	QV				
5+45	0.0035	0.01	QV				
5+50	0.0036	0.01	QV				
5+55	0.0037	0.01	QV				
6+ 0	0.0037	0.01	QV				
6+ 5	0.0038	0.01	QV				
6+10	0.0039	0.01	QV				
6+15	0.0040	0.01	QV				
6+20	0.0041	0.01	QV				
6+25	0.0042	0.01	QV				
6+30	0.0043	0.01	QV				
6+35	0.0044	0.01	QV				
6+40	0.0045	0.02	QV				
6+45	0.0046	0.02	QV				
6+50	0.0047	0.02	Q V				
6+55	0.0048	0.02	Q V				
7+ 0	0.0049	0.02	Q V				
7+ 5	0.0050	0.02	Q V				
7+10	0.0051	0.02	Q V				
7+15	0.0052	0.02	Q V				
7+20	0.0053	0.02	Q V				
7+25	0.0054	0.02	Q V				
7+30	0.0056	0.02	Q V				
7+35	0.0057	0.02	Q V				
7+40	0.0058	0.02	Q V				
7+45	0.0059	0.02	Q V				

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 7+50       0.0061      0.02  Q V       |         |         |         |
 7+55       0.0062      0.02  Q V       |         |         |         |
 8+ 0       0.0063      0.02  Q V       |         |         |         |
 8+ 5       0.0065      0.02  Q V       |         |         |         |
 8+10       0.0066      0.02  Q V       |         |         |         |
 8+15       0.0068      0.02  Q V       |         |         |         |
 8+20       0.0069      0.02  Q  V      |         |         |         |
 8+25       0.0071      0.02  Q  V      |         |         |         |
 8+30       0.0073      0.02  Q  V      |         |         |         |
 8+35       0.0074      0.02  Q  V      |         |         |         |
 8+40       0.0076      0.02  Q  V      |         |         |         |
 8+45       0.0078      0.02  Q  V      |         |         |         |
 8+50       0.0079      0.03  Q  V      |         |         |         |
 8+55       0.0081      0.03  Q  V      |         |         |         |
 9+ 0       0.0083      0.03  Q  V      |         |         |         |
 9+ 5       0.0085      0.03  Q  V      |         |         |         |
 9+10       0.0088      0.04  Q  V      |         |         |         |
 9+15       0.0091      0.04  Q  V      |         |         |         |
 9+20       0.0094      0.05  Q   V     |         |         |         |
 9+25       0.0098      0.06  Q   V     |         |         |         |
 9+30       0.0102      0.06  Q   V     |         |         |         |
 9+35       0.0107      0.07  Q   V     |         |         |         |
 9+40       0.0112      0.08  Q   V     |         |         |         |
 9+45       0.0118      0.08  Q    V    |         |         |         |
 9+50       0.0124      0.09  Q    V    |         |         |         |
 9+55       0.0130      0.09  Q    V    |         |         |         |
10+ 0       0.0137      0.10  Q    V    |         |         |         |
10+ 5       0.0140      0.04  Q     V   |         |         |         |
10+10       0.0141      0.02  Q     V   |         |         |         |
10+15       0.0143      0.02  Q     V   |         |         |         |
10+20       0.0144      0.02  Q     V   |         |         |         |
10+25       0.0146      0.02  Q     V   |         |         |         |
10+30       0.0148      0.02  Q     V   |         |         |         |
10+35       0.0152      0.06  Q     V   |         |         |         |
10+40       0.0157      0.07  Q     V   |         |         |         |
10+45       0.0162      0.08  Q      V  |         |         |         |
10+50       0.0167      0.08  Q      V  |         |         |         |
10+55       0.0173      0.08  Q      V  |         |         |         |
11+ 0       0.0178      0.08  Q      V  |         |         |         |
11+ 5       0.0183      0.07  Q      V  |         |         |         |
11+10       0.0187      0.07  Q       V |         |         |         |
11+15       0.0192      0.07  Q       V |         |         |         |
11+20       0.0197      0.07  Q       V |         |         |         |
11+25       0.0202      0.07  Q       V |         |         |         |
11+30       0.0206      0.07  Q       V |         |         |         |
11+35       0.0210      0.05  Q        V|         |         |         |
11+40       0.0213      0.04  Q        V|         |         |         |
11+45       0.0216      0.04  Q        V|         |         |         |
11+50       0.0220      0.06  Q        V|         |         |         |
11+55       0.0224      0.06  Q        V|         |         |         |
12+ 0       0.0228      0.06  Q        V|         |         |         |
12+ 5       0.0238      0.14  Q         V         |         |         |
12+10       0.0249      0.17  Q         V         |         |         |
12+15       0.0261      0.17  Q         |V        |         |         |
12+20       0.0274      0.18  Q         |V        |         |         |
12+25       0.0287      0.19  Q         | V       |         |         |
12+30       0.0299      0.19  Q         | V       |         |         |
12+35       0.0314      0.21  Q         |  V      |         |         |
12+40       0.0329      0.22  Q         |   V     |         |         |
12+45       0.0344      0.22  Q         |   V     |         |         |
12+50       0.0361      0.23  Q         |    V    |         |         |
12+55       0.0377      0.24  Q         |     V   |         |         |
13+ 0       0.0393      0.24  Q         |      V  |         |         |
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13+ 5	0.0414	0.30	|Q	|	V	|	|	|
13+10	0.0436	0.32	|Q	|	V	|	|	|
13+15	0.0457	0.32	|Q	|	V	|	|	|
13+20	0.0479	0.32	|Q	|	V	|	|	|
13+25	0.0501	0.32	|Q	|	V	|	|	|
13+30	0.0523	0.32	|Q	|	V	|	|	|
13+35	0.0537	0.20	Q	|	V	|	|	|
13+40	0.0548	0.16	Q	|	V	|	|	|
13+45	0.0559	0.16	Q	|	V	|	|	|
13+50	0.0570	0.16	Q	|	V	|	|	|
13+55	0.0581	0.16	Q	|	V	|	|	|
14+ 0	0.0592	0.16	Q	|	V	|	|	|
14+ 5	0.0606	0.21	Q	|	V	|	|	|
14+10	0.0621	0.22	Q	|	V	|	|	|
14+15	0.0637	0.22	Q	|	V	|	|	|
14+20	0.0652	0.21	Q	|	V	|	|	|
14+25	0.0666	0.21	Q	|	V	|	|	|
14+30	0.0681	0.21	Q	|	V	|	|	|
14+35	0.0695	0.21	Q	|	V	|	|	|
14+40	0.0710	0.21	Q	|	V	|	|	|
14+45	0.0725	0.21	Q	|	V	|	|	|
14+50	0.0739	0.20	Q	|	V	|	|	|
14+55	0.0753	0.20	Q	|	V	|	|	|
15+ 0	0.0766	0.20	Q	|	V	|	|	|
15+ 5	0.0780	0.19	Q	|	V	|	|	|
15+10	0.0793	0.19	Q	|	V	|	|	|
15+15	0.0806	0.19	Q	|	V	|	|	|
15+20	0.0818	0.18	Q	|	V	|	|	|
15+25	0.0830	0.18	Q	|	V	|	|	|
15+30	0.0842	0.18	Q	|	V	|	|	|
15+35	0.0852	0.13	Q	|	V	|	|	|
15+40	0.0860	0.12	Q	|	V	|	|	|
15+45	0.0868	0.12	Q	|	V	|	|	|
15+50	0.0876	0.12	Q	|	V	|	|	|
15+55	0.0885	0.12	Q	|	V	|	|	|
16+ 0	0.0893	0.12	Q	|	V	|	|	|
16+ 5	0.0895	0.04	Q	|	V	|	|	|
16+10	0.0896	0.01	Q	|	V	|	|	|
16+15	0.0896	0.01	Q	|	V	|	|	|
16+20	0.0897	0.01	Q	|	V	|	|	|
16+25	0.0897	0.01	Q	|	V	|	|	|
16+30	0.0898	0.01	Q	|	V	|	|	|
16+35	0.0898	0.00	Q	|	V	|	|	|
16+40	0.0898	0.00	Q	|	V	|	|	|
16+45	0.0898	0.00	Q	|	V	|	|	|
16+50	0.0899	0.00	Q	|	V	|	|	|
16+55	0.0899	0.00	Q	|	V	|	|	|
17+ 0	0.0899	0.00	Q	|	V	|	|	|
17+ 5	0.0900	0.01	Q	|	V	|	|	|
17+10	0.0900	0.01	Q	|	V	|	|	|
17+15	0.0901	0.01	Q	|	V	|	|	|
17+20	0.0901	0.01	Q	|	V	|	|	|
17+25	0.0902	0.01	Q	|	V	|	|	|
17+30	0.0902	0.01	Q	|	V	|	|	|
17+35	0.0903	0.01	Q	|	V	|	|	|
17+40	0.0904	0.01	Q	|	V	|	|	|
17+45	0.0904	0.01	Q	|	V	|	|	|
17+50	0.0904	0.01	Q	|	V	|	|	|
17+55	0.0905	0.01	Q	|	V	|	|	|
18+ 0	0.0905	0.01	Q	|	V	|	|	|
18+ 5	0.0906	0.01	Q	|	V	|	|	|
18+10	0.0906	0.01	Q	|	V	|	|	|
18+15	0.0907	0.01	Q	|	V	|	|	|

18+20	0.0907	0.01	Q	|	|	|	V|
18+25	0.0907	0.01	Q	|	|	|	V|
18+30	0.0908	0.01	Q	|	|	|	V|
18+35	0.0908	0.00	Q	|	|	|	V|
18+40	0.0908	0.00	Q	|	|	|	V|
18+45	0.0909	0.00	Q	|	|	|	V|
18+50	0.0909	0.00	Q	|	|	|	V|
18+55	0.0909	0.00	Q	|	|	|	V|
19+ 0	0.0909	0.00	Q	|	|	|	V|
19+ 5	0.0910	0.00	Q	|	|	|	V|
19+10	0.0910	0.00	Q	|	|	|	V|
19+15	0.0910	0.00	Q	|	|	|	V|
19+20	0.0911	0.01	Q	|	|	|	V|
19+25	0.0911	0.01	Q	|	|	|	V|
19+30	0.0911	0.01	Q	|	|	|	V|
19+35	0.0912	0.00	Q	|	|	|	V|
19+40	0.0912	0.00	Q	|	|	|	V|
19+45	0.0912	0.00	Q	|	|	|	V|
19+50	0.0913	0.00	Q	|	|	|	V|
19+55	0.0913	0.00	Q	|	|	|	V|
20+ 0	0.0913	0.00	Q	|	|	|	V|
20+ 5	0.0913	0.00	Q	|	|	|	V|
20+10	0.0914	0.00	Q	|	|	|	V|
20+15	0.0914	0.00	Q	|	|	|	V|
20+20	0.0914	0.00	Q	|	|	|	V|
20+25	0.0915	0.00	Q	|	|	|	V|
20+30	0.0915	0.00	Q	|	|	|	V|
20+35	0.0915	0.00	Q	|	|	|	V|
20+40	0.0916	0.00	Q	|	|	|	V|
20+45	0.0916	0.00	Q	|	|	|	V|
20+50	0.0916	0.00	Q	|	|	|	V|
20+55	0.0916	0.00	Q	|	|	|	V|
21+ 0	0.0917	0.00	Q	|	|	|	V|
21+ 5	0.0917	0.00	Q	|	|	|	V|
21+10	0.0917	0.00	Q	|	|	|	V|
21+15	0.0917	0.00	Q	|	|	|	V|
21+20	0.0918	0.00	Q	|	|	|	V|
21+25	0.0918	0.00	Q	|	|	|	V|
21+30	0.0918	0.00	Q	|	|	|	V|
21+35	0.0918	0.00	Q	|	|	|	V|
21+40	0.0919	0.00	Q	|	|	|	V|
21+45	0.0919	0.00	Q	|	|	|	V|
21+50	0.0919	0.00	Q	|	|	|	V|
21+55	0.0919	0.00	Q	|	|	|	V|
22+ 0	0.0920	0.00	Q	|	|	|	V|
22+ 5	0.0920	0.00	Q	|	|	|	V|
22+10	0.0920	0.00	Q	|	|	|	V|
22+15	0.0921	0.00	Q	|	|	|	V|
22+20	0.0921	0.00	Q	|	|	|	V|
22+25	0.0921	0.00	Q	|	|	|	V|
22+30	0.0921	0.00	Q	|	|	|	V|
22+35	0.0921	0.00	Q	|	|	|	V|
22+40	0.0922	0.00	Q	|	|	|	V|
22+45	0.0922	0.00	Q	|	|	|	V|
22+50	0.0922	0.00	Q	|	|	|	V|
22+55	0.0922	0.00	Q	|	|	|	V|
23+ 0	0.0922	0.00	Q	|	|	|	V|
23+ 5	0.0923	0.00	Q	|	|	|	V|
23+10	0.0923	0.00	Q	|	|	|	V|
23+15	0.0923	0.00	Q	|	|	|	V|
23+20	0.0923	0.00	Q	|	|	|	V|
23+25	0.0923	0.00	Q	|	|	|	V|
23+30	0.0924	0.00	Q	|	|	|	V|

23+35	0.0924	0.00	Q				V
23+40	0.0924	0.00	Q				V
23+45	0.0924	0.00	Q				V
23+50	0.0924	0.00	Q				V
23+55	0.0925	0.00	Q				V
24+ 0	0.0925	0.00	Q				V
24+ 5	0.0925	0.00	Q				V

C.9 - Area "F"

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

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Study date 07/10/25 File: tcpf242.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
OFFSITE AREA "F" VERNAL POOL TRIBUTARY
2-YEAR
24-HOUR

Drainage Area = 27.89(Ac.) = 0.044 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 27.89(Ac.) = 0.044 Sq. Mi.
Length along longest watercourse = 2852.00(Ft.)
Length along longest watercourse measured to centroid = 1426.00(Ft.)
Length along longest watercourse = 0.540 Mi.
Length along longest watercourse measured to centroid = 0.270 Mi.
Difference in elevation = 419.70(Ft.)
Slope along watercourse = 777.0042 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.082 Hr.
Lag time = 4.89 Min.
25% of lag time = 1.22 Min.
40% of lag time = 1.96 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.89	1.80	50.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.89	4.50	125.51

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
27.890	81.20	0.039

Total Area Entered = 27.89(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
81.2	64.7	0.419	0.039	0.405	1.000	0.405
					Sum (F) =	0.405

Area averaged mean soil loss (F) (In/Hr) = 0.405
Minimum soil loss rate ((In/Hr)) = 0.202
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.869

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	102.218	19.881	5.588
2	0.167	204.436	48.554	13.647
3	0.250	306.654	15.309	4.303
4	0.333	408.872	6.946	1.952
5	0.417	511.090	3.888	1.093
6	0.500	613.308	2.508	0.705
7	0.583	715.526	1.531	0.430
8	0.667	817.744	1.382	0.388
		Sum = 100.000	Sum=	28.108

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.014	(0.717)	0.013	0.002
2	0.17	0.07	0.014	(0.715)	0.013	0.002
3	0.25	0.07	0.014	(0.712)	0.013	0.002
4	0.33	0.10	0.022	(0.709)	0.019	0.003
5	0.42	0.10	0.022	(0.706)	0.019	0.003
6	0.50	0.10	0.022	(0.704)	0.019	0.003
7	0.58	0.10	0.022	(0.701)	0.019	0.003
8	0.67	0.10	0.022	(0.698)	0.019	0.003
9	0.75	0.10	0.022	(0.695)	0.019	0.003
10	0.83	0.13	0.029	(0.693)	0.025	0.004
11	0.92	0.13	0.029	(0.690)	0.025	0.004
12	1.00	0.13	0.029	(0.687)	0.025	0.004
13	1.08	0.10	0.022	(0.685)	0.019	0.003
14	1.17	0.10	0.022	(0.682)	0.019	0.003
15	1.25	0.10	0.022	(0.679)	0.019	0.003
16	1.33	0.10	0.022	(0.676)	0.019	0.003
17	1.42	0.10	0.022	(0.674)	0.019	0.003
18	1.50	0.10	0.022	(0.671)	0.019	0.003

19	1.58	0.10	0.022	(0.668)	0.019	0.003
20	1.67	0.10	0.022	(0.666)	0.019	0.003
21	1.75	0.10	0.022	(0.663)	0.019	0.003
22	1.83	0.13	0.029	(0.660)	0.025	0.004
23	1.92	0.13	0.029	(0.658)	0.025	0.004
24	2.00	0.13	0.029	(0.655)	0.025	0.004
25	2.08	0.13	0.029	(0.652)	0.025	0.004
26	2.17	0.13	0.029	(0.650)	0.025	0.004
27	2.25	0.13	0.029	(0.647)	0.025	0.004
28	2.33	0.13	0.029	(0.644)	0.025	0.004
29	2.42	0.13	0.029	(0.642)	0.025	0.004
30	2.50	0.13	0.029	(0.639)	0.025	0.004
31	2.58	0.17	0.036	(0.637)	0.031	0.005
32	2.67	0.17	0.036	(0.634)	0.031	0.005
33	2.75	0.17	0.036	(0.631)	0.031	0.005
34	2.83	0.17	0.036	(0.629)	0.031	0.005
35	2.92	0.17	0.036	(0.626)	0.031	0.005
36	3.00	0.17	0.036	(0.624)	0.031	0.005
37	3.08	0.17	0.036	(0.621)	0.031	0.005
38	3.17	0.17	0.036	(0.618)	0.031	0.005
39	3.25	0.17	0.036	(0.616)	0.031	0.005
40	3.33	0.17	0.036	(0.613)	0.031	0.005
41	3.42	0.17	0.036	(0.611)	0.031	0.005
42	3.50	0.17	0.036	(0.608)	0.031	0.005
43	3.58	0.17	0.036	(0.606)	0.031	0.005
44	3.67	0.17	0.036	(0.603)	0.031	0.005
45	3.75	0.17	0.036	(0.601)	0.031	0.005
46	3.83	0.20	0.043	(0.598)	0.038	0.006
47	3.92	0.20	0.043	(0.595)	0.038	0.006
48	4.00	0.20	0.043	(0.593)	0.038	0.006
49	4.08	0.20	0.043	(0.590)	0.038	0.006
50	4.17	0.20	0.043	(0.588)	0.038	0.006
51	4.25	0.20	0.043	(0.585)	0.038	0.006
52	4.33	0.23	0.050	(0.583)	0.044	0.007
53	4.42	0.23	0.050	(0.580)	0.044	0.007
54	4.50	0.23	0.050	(0.578)	0.044	0.007
55	4.58	0.23	0.050	(0.575)	0.044	0.007
56	4.67	0.23	0.050	(0.573)	0.044	0.007
57	4.75	0.23	0.050	(0.571)	0.044	0.007
58	4.83	0.27	0.058	(0.568)	0.050	0.008
59	4.92	0.27	0.058	(0.566)	0.050	0.008
60	5.00	0.27	0.058	(0.563)	0.050	0.008
61	5.08	0.20	0.043	(0.561)	0.038	0.006
62	5.17	0.20	0.043	(0.558)	0.038	0.006
63	5.25	0.20	0.043	(0.556)	0.038	0.006
64	5.33	0.23	0.050	(0.553)	0.044	0.007
65	5.42	0.23	0.050	(0.551)	0.044	0.007
66	5.50	0.23	0.050	(0.549)	0.044	0.007
67	5.58	0.27	0.058	(0.546)	0.050	0.008
68	5.67	0.27	0.058	(0.544)	0.050	0.008
69	5.75	0.27	0.058	(0.541)	0.050	0.008
70	5.83	0.27	0.058	(0.539)	0.050	0.008
71	5.92	0.27	0.058	(0.537)	0.050	0.008
72	6.00	0.27	0.058	(0.534)	0.050	0.008
73	6.08	0.30	0.065	(0.532)	0.056	0.009
74	6.17	0.30	0.065	(0.530)	0.056	0.009
75	6.25	0.30	0.065	(0.527)	0.056	0.009
76	6.33	0.30	0.065	(0.525)	0.056	0.009
77	6.42	0.30	0.065	(0.522)	0.056	0.009
78	6.50	0.30	0.065	(0.520)	0.056	0.009
79	6.58	0.33	0.072	(0.518)	0.063	0.009
80	6.67	0.33	0.072	(0.515)	0.063	0.009
81	6.75	0.33	0.072	(0.513)	0.063	0.009

82	6.83	0.33	0.072	(0.511)	0.063	0.009
83	6.92	0.33	0.072	(0.508)	0.063	0.009
84	7.00	0.33	0.072	(0.506)	0.063	0.009
85	7.08	0.33	0.072	(0.504)	0.063	0.009
86	7.17	0.33	0.072	(0.502)	0.063	0.009
87	7.25	0.33	0.072	(0.499)	0.063	0.009
88	7.33	0.37	0.079	(0.497)	0.069	0.010
89	7.42	0.37	0.079	(0.495)	0.069	0.010
90	7.50	0.37	0.079	(0.492)	0.069	0.010
91	7.58	0.40	0.086	(0.490)	0.075	0.011
92	7.67	0.40	0.086	(0.488)	0.075	0.011
93	7.75	0.40	0.086	(0.486)	0.075	0.011
94	7.83	0.43	0.094	(0.483)	0.081	0.012
95	7.92	0.43	0.094	(0.481)	0.081	0.012
96	8.00	0.43	0.094	(0.479)	0.081	0.012
97	8.08	0.50	0.108	(0.477)	0.094	0.014
98	8.17	0.50	0.108	(0.475)	0.094	0.014
99	8.25	0.50	0.108	(0.472)	0.094	0.014
100	8.33	0.50	0.108	(0.470)	0.094	0.014
101	8.42	0.50	0.108	(0.468)	0.094	0.014
102	8.50	0.50	0.108	(0.466)	0.094	0.014
103	8.58	0.53	0.115	(0.464)	0.100	0.015
104	8.67	0.53	0.115	(0.461)	0.100	0.015
105	8.75	0.53	0.115	(0.459)	0.100	0.015
106	8.83	0.57	0.122	(0.457)	0.106	0.016
107	8.92	0.57	0.122	(0.455)	0.106	0.016
108	9.00	0.57	0.122	(0.453)	0.106	0.016
109	9.08	0.63	0.137	(0.451)	0.119	0.018
110	9.17	0.63	0.137	(0.448)	0.119	0.018
111	9.25	0.63	0.137	(0.446)	0.119	0.018
112	9.33	0.67	0.144	(0.444)	0.125	0.019
113	9.42	0.67	0.144	(0.442)	0.125	0.019
114	9.50	0.67	0.144	(0.440)	0.125	0.019
115	9.58	0.70	0.151	(0.438)	0.131	0.020
116	9.67	0.70	0.151	(0.436)	0.131	0.020
117	9.75	0.70	0.151	(0.434)	0.131	0.020
118	9.83	0.73	0.158	(0.432)	0.138	0.021
119	9.92	0.73	0.158	(0.429)	0.138	0.021
120	10.00	0.73	0.158	(0.427)	0.138	0.021
121	10.08	0.50	0.108	(0.425)	0.094	0.014
122	10.17	0.50	0.108	(0.423)	0.094	0.014
123	10.25	0.50	0.108	(0.421)	0.094	0.014
124	10.33	0.50	0.108	(0.419)	0.094	0.014
125	10.42	0.50	0.108	(0.417)	0.094	0.014
126	10.50	0.50	0.108	(0.415)	0.094	0.014
127	10.58	0.67	0.144	(0.413)	0.125	0.019
128	10.67	0.67	0.144	(0.411)	0.125	0.019
129	10.75	0.67	0.144	(0.409)	0.125	0.019
130	10.83	0.67	0.144	(0.407)	0.125	0.019
131	10.92	0.67	0.144	(0.405)	0.125	0.019
132	11.00	0.67	0.144	(0.403)	0.125	0.019
133	11.08	0.63	0.137	(0.401)	0.119	0.018
134	11.17	0.63	0.137	(0.399)	0.119	0.018
135	11.25	0.63	0.137	(0.397)	0.119	0.018
136	11.33	0.63	0.137	(0.395)	0.119	0.018
137	11.42	0.63	0.137	(0.393)	0.119	0.018
138	11.50	0.63	0.137	(0.391)	0.119	0.018
139	11.58	0.57	0.122	(0.389)	0.106	0.016
140	11.67	0.57	0.122	(0.387)	0.106	0.016
141	11.75	0.57	0.122	(0.385)	0.106	0.016
142	11.83	0.60	0.130	(0.384)	0.113	0.017
143	11.92	0.60	0.130	(0.382)	0.113	0.017
144	12.00	0.60	0.130	(0.380)	0.113	0.017

145	12.08	0.83	0.180	(0.378)	0.156	0.024
146	12.17	0.83	0.180	(0.376)	0.156	0.024
147	12.25	0.83	0.180	(0.374)	0.156	0.024
148	12.33	0.87	0.187	(0.372)	0.163	0.025
149	12.42	0.87	0.187	(0.370)	0.163	0.025
150	12.50	0.87	0.187	(0.368)	0.163	0.025
151	12.58	0.93	0.202	(0.367)	0.175	0.026
152	12.67	0.93	0.202	(0.365)	0.175	0.026
153	12.75	0.93	0.202	(0.363)	0.175	0.026
154	12.83	0.97	0.209	(0.361)	0.181	0.027
155	12.92	0.97	0.209	(0.359)	0.181	0.027
156	13.00	0.97	0.209	(0.357)	0.181	0.027
157	13.08	1.13	0.245	(0.356)	0.213	0.032
158	13.17	1.13	0.245	(0.354)	0.213	0.032
159	13.25	1.13	0.245	(0.352)	0.213	0.032
160	13.33	1.13	0.245	(0.350)	0.213	0.032
161	13.42	1.13	0.245	(0.348)	0.213	0.032
162	13.50	1.13	0.245	(0.347)	0.213	0.032
163	13.58	0.77	0.166	(0.345)	0.144	0.022
164	13.67	0.77	0.166	(0.343)	0.144	0.022
165	13.75	0.77	0.166	(0.341)	0.144	0.022
166	13.83	0.77	0.166	(0.340)	0.144	0.022
167	13.92	0.77	0.166	(0.338)	0.144	0.022
168	14.00	0.77	0.166	(0.336)	0.144	0.022
169	14.08	0.90	0.194	(0.334)	0.169	0.026
170	14.17	0.90	0.194	(0.333)	0.169	0.026
171	14.25	0.90	0.194	(0.331)	0.169	0.026
172	14.33	0.87	0.187	(0.329)	0.163	0.025
173	14.42	0.87	0.187	(0.328)	0.163	0.025
174	14.50	0.87	0.187	(0.326)	0.163	0.025
175	14.58	0.87	0.187	(0.324)	0.163	0.025
176	14.67	0.87	0.187	(0.323)	0.163	0.025
177	14.75	0.87	0.187	(0.321)	0.163	0.025
178	14.83	0.83	0.180	(0.319)	0.156	0.024
179	14.92	0.83	0.180	(0.318)	0.156	0.024
180	15.00	0.83	0.180	(0.316)	0.156	0.024
181	15.08	0.80	0.173	(0.314)	0.150	0.023
182	15.17	0.80	0.173	(0.313)	0.150	0.023
183	15.25	0.80	0.173	(0.311)	0.150	0.023
184	15.33	0.77	0.166	(0.310)	0.144	0.022
185	15.42	0.77	0.166	(0.308)	0.144	0.022
186	15.50	0.77	0.166	(0.307)	0.144	0.022
187	15.58	0.63	0.137	(0.305)	0.119	0.018
188	15.67	0.63	0.137	(0.303)	0.119	0.018
189	15.75	0.63	0.137	(0.302)	0.119	0.018
190	15.83	0.63	0.137	(0.300)	0.119	0.018
191	15.92	0.63	0.137	(0.299)	0.119	0.018
192	16.00	0.63	0.137	(0.297)	0.119	0.018
193	16.08	0.13	0.029	(0.296)	0.025	0.004
194	16.17	0.13	0.029	(0.294)	0.025	0.004
195	16.25	0.13	0.029	(0.293)	0.025	0.004
196	16.33	0.13	0.029	(0.291)	0.025	0.004
197	16.42	0.13	0.029	(0.290)	0.025	0.004
198	16.50	0.13	0.029	(0.288)	0.025	0.004
199	16.58	0.10	0.022	(0.287)	0.019	0.003
200	16.67	0.10	0.022	(0.285)	0.019	0.003
201	16.75	0.10	0.022	(0.284)	0.019	0.003
202	16.83	0.10	0.022	(0.282)	0.019	0.003
203	16.92	0.10	0.022	(0.281)	0.019	0.003
204	17.00	0.10	0.022	(0.280)	0.019	0.003
205	17.08	0.17	0.036	(0.278)	0.031	0.005
206	17.17	0.17	0.036	(0.277)	0.031	0.005
207	17.25	0.17	0.036	(0.275)	0.031	0.005

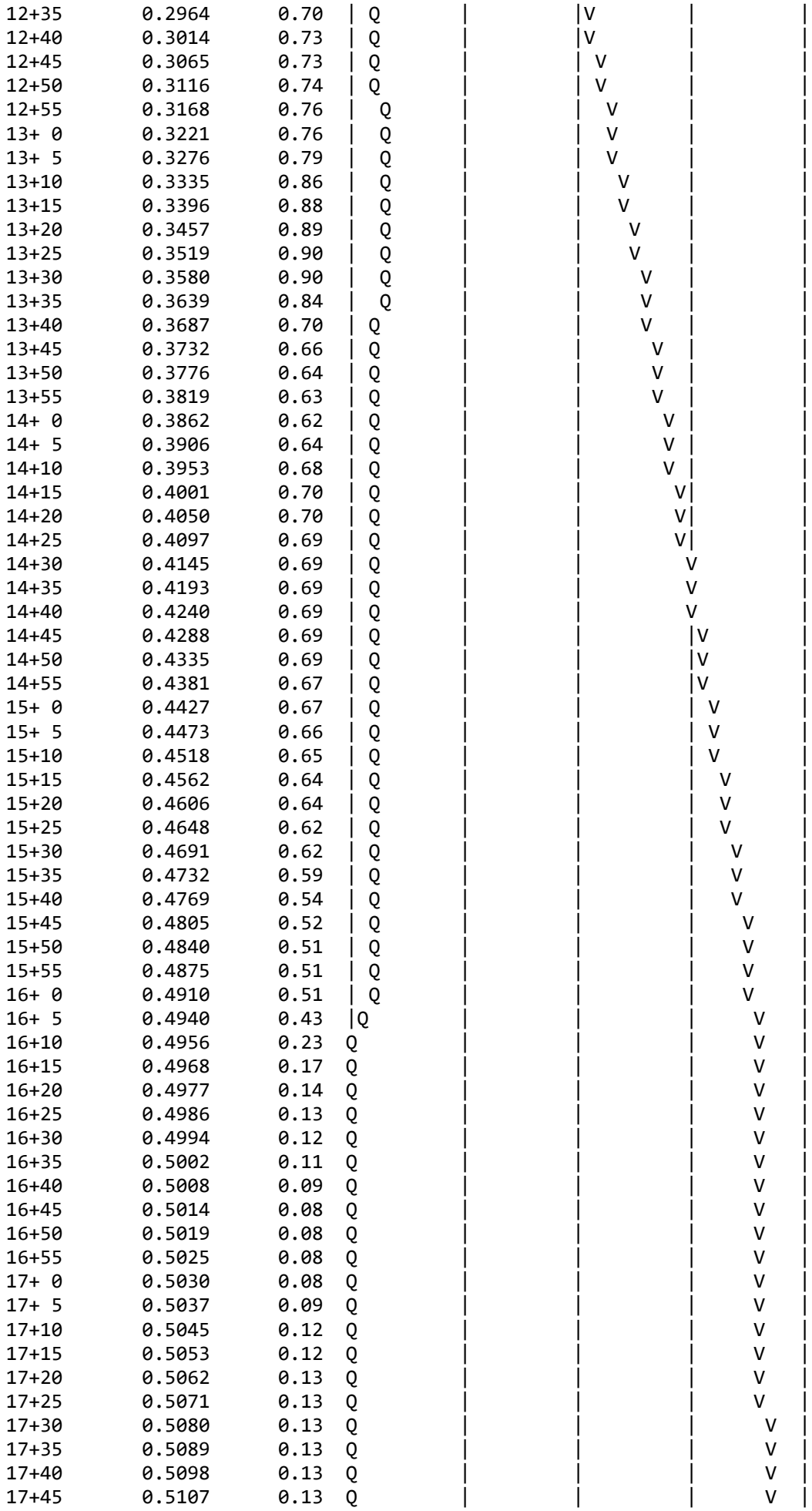
208	17.33	0.17	0.036	(0.274)	0.031	0.005
209	17.42	0.17	0.036	(0.273)	0.031	0.005
210	17.50	0.17	0.036	(0.271)	0.031	0.005
211	17.58	0.17	0.036	(0.270)	0.031	0.005
212	17.67	0.17	0.036	(0.269)	0.031	0.005
213	17.75	0.17	0.036	(0.267)	0.031	0.005
214	17.83	0.13	0.029	(0.266)	0.025	0.004
215	17.92	0.13	0.029	(0.265)	0.025	0.004
216	18.00	0.13	0.029	(0.263)	0.025	0.004
217	18.08	0.13	0.029	(0.262)	0.025	0.004
218	18.17	0.13	0.029	(0.261)	0.025	0.004
219	18.25	0.13	0.029	(0.259)	0.025	0.004
220	18.33	0.13	0.029	(0.258)	0.025	0.004
221	18.42	0.13	0.029	(0.257)	0.025	0.004
222	18.50	0.13	0.029	(0.256)	0.025	0.004
223	18.58	0.10	0.022	(0.254)	0.019	0.003
224	18.67	0.10	0.022	(0.253)	0.019	0.003
225	18.75	0.10	0.022	(0.252)	0.019	0.003
226	18.83	0.07	0.014	(0.251)	0.013	0.002
227	18.92	0.07	0.014	(0.250)	0.013	0.002
228	19.00	0.07	0.014	(0.248)	0.013	0.002
229	19.08	0.10	0.022	(0.247)	0.019	0.003
230	19.17	0.10	0.022	(0.246)	0.019	0.003
231	19.25	0.10	0.022	(0.245)	0.019	0.003
232	19.33	0.13	0.029	(0.244)	0.025	0.004
233	19.42	0.13	0.029	(0.243)	0.025	0.004
234	19.50	0.13	0.029	(0.241)	0.025	0.004
235	19.58	0.10	0.022	(0.240)	0.019	0.003
236	19.67	0.10	0.022	(0.239)	0.019	0.003
237	19.75	0.10	0.022	(0.238)	0.019	0.003
238	19.83	0.07	0.014	(0.237)	0.013	0.002
239	19.92	0.07	0.014	(0.236)	0.013	0.002
240	20.00	0.07	0.014	(0.235)	0.013	0.002
241	20.08	0.10	0.022	(0.234)	0.019	0.003
242	20.17	0.10	0.022	(0.233)	0.019	0.003
243	20.25	0.10	0.022	(0.232)	0.019	0.003
244	20.33	0.10	0.022	(0.231)	0.019	0.003
245	20.42	0.10	0.022	(0.230)	0.019	0.003
246	20.50	0.10	0.022	(0.229)	0.019	0.003
247	20.58	0.10	0.022	(0.228)	0.019	0.003
248	20.67	0.10	0.022	(0.227)	0.019	0.003
249	20.75	0.10	0.022	(0.226)	0.019	0.003
250	20.83	0.07	0.014	(0.225)	0.013	0.002
251	20.92	0.07	0.014	(0.224)	0.013	0.002
252	21.00	0.07	0.014	(0.223)	0.013	0.002
253	21.08	0.10	0.022	(0.222)	0.019	0.003
254	21.17	0.10	0.022	(0.222)	0.019	0.003
255	21.25	0.10	0.022	(0.221)	0.019	0.003
256	21.33	0.07	0.014	(0.220)	0.013	0.002
257	21.42	0.07	0.014	(0.219)	0.013	0.002
258	21.50	0.07	0.014	(0.218)	0.013	0.002
259	21.58	0.10	0.022	(0.217)	0.019	0.003
260	21.67	0.10	0.022	(0.217)	0.019	0.003
261	21.75	0.10	0.022	(0.216)	0.019	0.003
262	21.83	0.07	0.014	(0.215)	0.013	0.002
263	21.92	0.07	0.014	(0.214)	0.013	0.002
264	22.00	0.07	0.014	(0.214)	0.013	0.002
265	22.08	0.10	0.022	(0.213)	0.019	0.003
266	22.17	0.10	0.022	(0.212)	0.019	0.003
267	22.25	0.10	0.022	(0.212)	0.019	0.003
268	22.33	0.07	0.014	(0.211)	0.013	0.002
269	22.42	0.07	0.014	(0.210)	0.013	0.002
270	22.50	0.07	0.014	(0.210)	0.013	0.002

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271  22.58     0.07      0.014       (  0.209)       0.013        0.002
272  22.67     0.07      0.014       (  0.209)       0.013        0.002
273  22.75     0.07      0.014       (  0.208)       0.013        0.002
274  22.83     0.07      0.014       (  0.207)       0.013        0.002
275  22.92     0.07      0.014       (  0.207)       0.013        0.002
276  23.00     0.07      0.014       (  0.206)       0.013        0.002
277  23.08     0.07      0.014       (  0.206)       0.013        0.002
278  23.17     0.07      0.014       (  0.205)       0.013        0.002
279  23.25     0.07      0.014       (  0.205)       0.013        0.002
280  23.33     0.07      0.014       (  0.205)       0.013        0.002
281  23.42     0.07      0.014       (  0.204)       0.013        0.002
282  23.50     0.07      0.014       (  0.204)       0.013        0.002
283  23.58     0.07      0.014       (  0.203)       0.013        0.002
284  23.67     0.07      0.014       (  0.203)       0.013        0.002
285  23.75     0.07      0.014       (  0.203)       0.013        0.002
286  23.83     0.07      0.014       (  0.203)       0.013        0.002
287  23.92     0.07      0.014       (  0.203)       0.013        0.002
288  24.00     0.07      0.014       (  0.202)       0.013        0.002
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     2.8
       Flood volume = Effective rainfall      0.24(In)
        times area      27.9(Ac.)/[(In)/(Ft.)] =       0.5(Ac.Ft)
       Total soil loss =      1.56(In)
       Total soil loss =     3.634(Ac.Ft)
       Total rainfall =      1.80(In)
       Flood volume =       23907.7 Cubic Feet
       Total soil loss =      158315.6 Cubic Feet
       ------------------------------------------------------------------------
        Peak flow rate of this hydrograph =      0.899(CFS)
       ------------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0001      0.01  Q         |         |         |         |
   0+10       0.0003      0.04  Q         |         |         |         |
   0+15       0.0006      0.04  Q         |         |         |         |
   0+20       0.0010      0.05  Q         |         |         |         |
   0+25       0.0015      0.07  Q         |         |         |         |
   0+30       0.0020      0.07  Q         |         |         |         |
   0+35       0.0025      0.08  Q         |         |         |         |
   0+40       0.0030      0.08  Q         |         |         |         |
   0+45       0.0036      0.08  Q         |         |         |         |
   0+50       0.0042      0.08  Q         |         |         |         |
   0+55       0.0048      0.10  Q         |         |         |         |
   1+ 0       0.0055      0.10  Q         |         |         |         |
   1+ 5       0.0062      0.10  Q         |         |         |         |
   1+10       0.0068      0.09  Q         |         |         |         |
   1+15       0.0074      0.08  Q         |         |         |         |
   1+20       0.0080      0.08  Q         |         |         |         |
   1+25       0.0085      0.08  Q         |         |         |         |
   1+30       0.0091      0.08  Q         |         |         |         |
   1+35       0.0096      0.08  Q         |         |         |         |
   1+40       0.0102      0.08  Q         |         |         |         |
   1+45       0.0107      0.08  Q         |         |         |         |
   1+50       0.0113      0.08  Q         |         |         |         |
   1+55       0.0120      0.10  Q         |         |         |         |
   2+ 0       0.0127      0.10  Q         |         |         |         |
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2+ 5       0.0134      0.10  Q         |          |          |          |
2+10       0.0141      0.10  QV        |          |          |          |
2+15       0.0148      0.11  QV        |          |          |          |
2+20       0.0156      0.11  QV        |          |          |          |
2+25       0.0163      0.11  QV        |          |          |          |
2+30       0.0170      0.11  QV        |          |          |          |
2+35       0.0178      0.11  QV        |          |          |          |
2+40       0.0187      0.12  QV        |          |          |          |
2+45       0.0195      0.13  QV        |          |          |          |
2+50       0.0204      0.13  QV        |          |          |          |
2+55       0.0213      0.13  QV        |          |          |          |
3+ 0       0.0223      0.13  QV        |          |          |          |
3+ 5       0.0232      0.13  QV        |          |          |          |
3+10       0.0241      0.13  QV        |          |          |          |
3+15       0.0250      0.13  QV        |          |          |          |
3+20       0.0259      0.13  QV        |          |          |          |
3+25       0.0268      0.13  QV        |          |          |          |
3+30       0.0277      0.13  Q V       |          |          |          |
3+35       0.0287      0.13  Q V       |          |          |          |
3+40       0.0296      0.13  Q V       |          |          |          |
3+45       0.0305      0.13  Q V       |          |          |          |
3+50       0.0314      0.14  Q V       |          |          |          |
3+55       0.0325      0.15  Q V       |          |          |          |
4+ 0       0.0335      0.16  Q V       |          |          |          |
4+ 5       0.0346      0.16  Q V       |          |          |          |
4+10       0.0357      0.16  Q V       |          |          |          |
4+15       0.0368      0.16  Q V       |          |          |          |
4+20       0.0379      0.16  Q V       |          |          |          |
4+25       0.0392      0.18  Q V       |          |          |          |
4+30       0.0404      0.18  Q V       |          |          |          |
4+35       0.0417      0.18  Q  V      |          |          |          |
4+40       0.0429      0.18  Q  V      |          |          |          |
4+45       0.0442      0.19  Q  V      |          |          |          |
4+50       0.0455      0.19  Q  V      |          |          |          |
4+55       0.0469      0.20  Q  V      |          |          |          |
5+ 0       0.0484      0.21  Q  V      |          |          |          |
5+ 5       0.0498      0.20  Q  V      |          |          |          |
5+10       0.0510      0.17  Q  V      |          |          |          |
5+15       0.0521      0.17  Q  V      |          |          |          |
5+20       0.0533      0.17  Q  V      |          |          |          |
5+25       0.0545      0.18  Q  V      |          |          |          |
5+30       0.0558      0.18  Q   V     |          |          |          |
5+35       0.0571      0.19  Q   V     |          |          |          |
5+40       0.0585      0.20  Q   V     |          |          |          |
5+45       0.0599      0.21  Q   V     |          |          |          |
5+50       0.0613      0.21  Q   V     |          |          |          |
5+55       0.0628      0.21  Q   V     |          |          |          |
6+ 0       0.0643      0.21  Q   V     |          |          |          |
6+ 5       0.0658      0.22  Q   V     |          |          |          |
6+10       0.0673      0.23  Q   V     |          |          |          |
6+15       0.0690      0.23  Q    V    |          |          |          |
6+20       0.0706      0.24  Q    V    |          |          |          |
6+25       0.0722      0.24  Q    V    |          |          |          |
6+30       0.0739      0.24  Q    V    |          |          |          |
6+35       0.0756      0.24  Q    V    |          |          |          |
6+40       0.0773      0.26  |Q   V    |          |          |          |
6+45       0.0791      0.26  |Q   V    |          |          |          |
6+50       0.0809      0.26  |Q   V    |          |          |          |
6+55       0.0828      0.26  |Q    V   |          |          |          |
7+ 0       0.0846      0.26  |Q    V   |          |          |          |
7+ 5       0.0864      0.27  |Q    V   |          |          |          |
7+10       0.0882      0.27  |Q    V   |          |          |          |
7+15       0.0901      0.27  |Q    V   |          |          |          |
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 7+20       0.0919      0.27  |Q    V   |          |          |          |
 7+25       0.0939      0.28  |Q    V   |          |          |          |
 7+30       0.0959      0.29  |Q    V   |          |          |          |
 7+35       0.0979      0.30  |Q     V  |          |          |          |
 7+40       0.1000      0.31  |Q     V  |          |          |          |
 7+45       0.1022      0.31  |Q     V  |          |          |          |
 7+50       0.1044      0.32  |Q     V  |          |          |          |
 7+55       0.1067      0.34  |Q     V  |          |          |          |
 8+ 0       0.1091      0.34  |Q     V  |          |          |          |
 8+ 5       0.1115      0.35  |Q      V |          |          |          |
 8+10       0.1141      0.38  |Q      V |          |          |          |
 8+15       0.1168      0.39  |Q      V |          |          |          |
 8+20       0.1195      0.39  |Q      V |          |          |          |
 8+25       0.1222      0.40  |Q      V |          |          |          |
 8+30       0.1250      0.40  |Q       V|          |          |          |
 8+35       0.1277      0.40  |Q       V|          |          |          |
 8+40       0.1306      0.42  |Q       V|          |          |          |
 8+45       0.1335      0.42  |Q       V|          |          |          |
 8+50       0.1364      0.43  |Q       V|          |          |          |
 8+55       0.1395      0.44  |Q        V          |          |          |
 9+ 0       0.1426      0.45  |Q        V          |          |          |
 9+ 5       0.1457      0.46  |Q        V          |          |          |
 9+10       0.1491      0.49  |Q        V          |          |          |
 9+15       0.1525      0.50  |Q        |V         |          |          |
 9+20       0.1560      0.50  | Q       |V         |          |          |
 9+25       0.1595      0.52  | Q       |V         |          |          |
 9+30       0.1632      0.53  | Q       |V         |          |          |
 9+35       0.1668      0.53  | Q       | V        |          |          |
 9+40       0.1706      0.55  | Q       | V        |          |          |
 9+45       0.1744      0.55  | Q       | V        |          |          |
 9+50       0.1783      0.56  | Q       | V        |          |          |
 9+55       0.1822      0.57  | Q       |  V       |          |          |
10+ 0       0.1862      0.58  | Q       |  V       |          |          |
10+ 5       0.1900      0.54  | Q       |  V       |          |          |
10+10       0.1931      0.46  |Q        |   V      |          |          |
10+15       0.1961      0.43  |Q        |   V      |          |          |
10+20       0.1989      0.42  |Q        |   V      |          |          |
10+25       0.2017      0.41  |Q        |   V      |          |          |
10+30       0.2045      0.40  |Q        |   V      |          |          |
10+35       0.2075      0.43  |Q        |    V     |          |          |
10+40       0.2108      0.49  |Q        |    V     |          |          |
10+45       0.2143      0.51  | Q       |    V     |          |          |
10+50       0.2179      0.52  | Q       |    V     |          |          |
10+55       0.2215      0.52  | Q       |     V    |          |          |
11+ 0       0.2252      0.53  | Q       |     V    |          |          |
11+ 5       0.2288      0.52  | Q       |     V    |          |          |
11+10       0.2323      0.51  | Q       |     V    |          |          |
11+15       0.2358      0.51  | Q       |      V   |          |          |
11+20       0.2393      0.51  | Q       |      V   |          |          |
11+25       0.2428      0.51  | Q       |      V   |          |          |
11+30       0.2463      0.51  | Q       |      V   |          |          |
11+35       0.2497      0.49  |Q        |       V  |          |          |
11+40       0.2529      0.47  |Q        |       V  |          |          |
11+45       0.2561      0.46  |Q        |       V  |          |          |
11+50       0.2592      0.46  |Q        |       V  |          |          |
11+55       0.2625      0.47  |Q        |        V |          |          |
12+ 0       0.2658      0.48  |Q        |        V |          |          |
12+ 5       0.2693      0.51  | Q       |        V |          |          |
12+10       0.2735      0.60  | Q       |        V |          |          |
12+15       0.2778      0.63  | Q       |         V          |          |
12+20       0.2823      0.65  | Q       |         V          |          |
12+25       0.2869      0.67  | Q       |         V          |          |
12+30       0.2916      0.68  | Q       |          |V        |          |
```



12+35	0.2964	0.70	Q		V		
12+40	0.3014	0.73	Q		V		
12+45	0.3065	0.73	Q		V		
12+50	0.3116	0.74	Q		V		
12+55	0.3168	0.76	Q		V		
13+ 0	0.3221	0.76	Q		V		
13+ 5	0.3276	0.79	Q		V		
13+10	0.3335	0.86	Q		V		
13+15	0.3396	0.88	Q		V		
13+20	0.3457	0.89	Q		V		
13+25	0.3519	0.90	Q		V		
13+30	0.3580	0.90	Q		V		
13+35	0.3639	0.84	Q		V		
13+40	0.3687	0.70	Q		V		
13+45	0.3732	0.66	Q		V		
13+50	0.3776	0.64	Q		V		
13+55	0.3819	0.63	Q		V		
14+ 0	0.3862	0.62	Q		V		
14+ 5	0.3906	0.64	Q		V		
14+10	0.3953	0.68	Q		V		
14+15	0.4001	0.70	Q		V		
14+20	0.4050	0.70	Q		V		
14+25	0.4097	0.69	Q		V		
14+30	0.4145	0.69	Q		V		
14+35	0.4193	0.69	Q		V		
14+40	0.4240	0.69	Q		V		
14+45	0.4288	0.69	Q		V		
14+50	0.4335	0.69	Q		V		
14+55	0.4381	0.67	Q		V		
15+ 0	0.4427	0.67	Q		V		
15+ 5	0.4473	0.66	Q		V		
15+10	0.4518	0.65	Q		V		
15+15	0.4562	0.64	Q		V		
15+20	0.4606	0.64	Q		V		
15+25	0.4648	0.62	Q		V		
15+30	0.4691	0.62	Q		V		
15+35	0.4732	0.59	Q		V		
15+40	0.4769	0.54	Q		V		
15+45	0.4805	0.52	Q		V		
15+50	0.4840	0.51	Q		V		
15+55	0.4875	0.51	Q		V		
16+ 0	0.4910	0.51	Q		V		
16+ 5	0.4940	0.43	Q		V		
16+10	0.4956	0.23	Q		V		
16+15	0.4968	0.17	Q		V		
16+20	0.4977	0.14	Q		V		
16+25	0.4986	0.13	Q		V		
16+30	0.4994	0.12	Q		V		
16+35	0.5002	0.11	Q		V		
16+40	0.5008	0.09	Q		V		
16+45	0.5014	0.08	Q		V		
16+50	0.5019	0.08	Q		V		
16+55	0.5025	0.08	Q		V		
17+ 0	0.5030	0.08	Q		V		
17+ 5	0.5037	0.09	Q		V		
17+10	0.5045	0.12	Q		V		
17+15	0.5053	0.12	Q		V		
17+20	0.5062	0.13	Q		V		
17+25	0.5071	0.13	Q		V		
17+30	0.5080	0.13	Q		V		
17+35	0.5089	0.13	Q		V		
17+40	0.5098	0.13	Q		V		
17+45	0.5107	0.13	Q		V		

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17+50       0.5116      0.13  Q         |          |          |      V  |
17+55       0.5124      0.11  Q         |          |          |      V  |
18+ 0       0.5132      0.11  Q         |          |          |      V  |
18+ 5       0.5139      0.11  Q         |          |          |      V  |
18+10       0.5146      0.11  Q         |          |          |      V  |
18+15       0.5154      0.11  Q         |          |          |      V  |
18+20       0.5161      0.11  Q         |          |          |      V  |
18+25       0.5169      0.11  Q         |          |          |      V  |
18+30       0.5176      0.11  Q         |          |          |      V  |
18+35       0.5183      0.10  Q         |          |          |      V  |
18+40       0.5189      0.09  Q         |          |          |      V  |
18+45       0.5195      0.08  Q         |          |          |      V  |
18+50       0.5200      0.08  Q         |          |          |      V  |
18+55       0.5204      0.06  Q         |          |          |      V  |
19+ 0       0.5208      0.06  Q         |          |          |      V  |
19+ 5       0.5212      0.06  Q         |          |          |      V  |
19+10       0.5218      0.07  Q         |          |          |       V |
19+15       0.5223      0.08  Q         |          |          |       V |
19+20       0.5228      0.08  Q         |          |          |       V |
19+25       0.5235      0.10  Q         |          |          |       V |
19+30       0.5242      0.10  Q         |          |          |       V |
19+35       0.5249      0.10  Q         |          |          |       V |
19+40       0.5255      0.09  Q         |          |          |       V |
19+45       0.5261      0.08  Q         |          |          |       V |
19+50       0.5266      0.08  Q         |          |          |       V |
19+55       0.5270      0.06  Q         |          |          |       V |
20+ 0       0.5274      0.06  Q         |          |          |       V |
20+ 5       0.5278      0.06  Q         |          |          |       V |
20+10       0.5283      0.07  Q         |          |          |       V |
20+15       0.5289      0.08  Q         |          |          |       V |
20+20       0.5294      0.08  Q         |          |          |       V |
20+25       0.5299      0.08  Q         |          |          |       V |
20+30       0.5305      0.08  Q         |          |          |       V |
20+35       0.5310      0.08  Q         |          |          |       V |
20+40       0.5316      0.08  Q         |          |          |       V |
20+45       0.5321      0.08  Q         |          |          |       V |
20+50       0.5326      0.07  Q         |          |          |       V |
20+55       0.5331      0.06  Q         |          |          |       V |
21+ 0       0.5335      0.06  Q         |          |          |       V |
21+ 5       0.5339      0.06  Q         |          |          |       V |
21+10       0.5344      0.07  Q         |          |          |       V |
21+15       0.5349      0.08  Q         |          |          |       V |
21+20       0.5354      0.07  Q         |          |          |        V|
21+25       0.5358      0.06  Q         |          |          |        V|
21+30       0.5362      0.06  Q         |          |          |        V|
21+35       0.5366      0.06  Q         |          |          |        V|
21+40       0.5371      0.07  Q         |          |          |        V|
21+45       0.5376      0.08  Q         |          |          |        V|
21+50       0.5381      0.07  Q         |          |          |        V|
21+55       0.5386      0.06  Q         |          |          |        V|
22+ 0       0.5389      0.06  Q         |          |          |        V|
22+ 5       0.5394      0.06  Q         |          |          |        V|
22+10       0.5399      0.07  Q         |          |          |        V|
22+15       0.5404      0.08  Q         |          |          |        V|
22+20       0.5409      0.07  Q         |          |          |        V|
22+25       0.5413      0.06  Q         |          |          |        V|
22+30       0.5417      0.06  Q         |          |          |        V|
22+35       0.5421      0.06  Q         |          |          |        V|
22+40       0.5424      0.05  Q         |          |          |        V|
22+45       0.5428      0.05  Q         |          |          |        V|
22+50       0.5432      0.05  Q         |          |          |        V|
22+55       0.5436      0.05  Q         |          |          |        V|
23+ 0       0.5439      0.05  Q         |          |          |        V|
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  23+ 5       0.5443      0.05  Q          |          |          |         V|
  23+10       0.5446      0.05  Q          |          |          |         V|
  23+15       0.5450      0.05  Q          |          |          |         V|
  23+20       0.5454      0.05  Q          |          |          |         V|
  23+25       0.5457      0.05  Q          |          |          |         V|
  23+30       0.5461      0.05  Q          |          |          |         V|
  23+35       0.5465      0.05  Q          |          |          |         V|
  23+40       0.5468      0.05  Q          |          |          |         V|
  23+45       0.5472      0.05  Q          |          |          |         V|
  23+50       0.5476      0.05  Q          |          |          |         V|
  23+55       0.5479      0.05  Q          |          |          |         V|
  24+ 0       0.5483      0.05  Q          |          |          |         V|
  24+ 5       0.5486      0.04  Q          |          |          |         V|
  24+10       0.5487      0.02  Q          |          |          |         V|
  24+15       0.5488      0.01  Q          |          |          |         V|
  24+20       0.5488      0.00  Q          |          |          |         V|
  24+25       0.5488      0.00  Q          |          |          |         V|
  24+30       0.5488      0.00  Q          |          |          |         V|
  24+35       0.5488      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

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Study date 07/10/25 File: tcpf2410.out

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

Program License Serial Number 6545

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

English Units used in output format

TRACT 31513 PRELIMINARY HYDROLOGY & HYDRAULICS STUDY
OFFSITE AREA "F" VERNAL POOL TRIBUTARY
10-YEAR
24-HOUR

Drainage Area = 27.89(Ac.) = 0.044 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 27.89(Ac.) = 0.044 Sq. Mi.
Length along longest watercourse = 2852.00(Ft.)
Length along longest watercourse measured to centroid = 1426.00(Ft.)
Length along longest watercourse = 0.540 Mi.
Length along longest watercourse measured to centroid = 0.270 Mi.
Difference in elevation = 419.70(Ft.)
Slope along watercourse = 777.0042 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.082 Hr.
Lag time = 4.89 Min.
25% of lag time = 1.22 Min.
40% of lag time = 1.96 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.89	1.80	50.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.89	4.50	125.51

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 2.911(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.911(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
27.890	81.20	0.039

Total Area Entered = 27.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
81.2	81.2	0.230	0.039	0.222	1.000	0.222
					Sum (F) =	0.222

Area averaged mean soil loss (F) (In/Hr) = 0.222
Minimum soil loss rate ((In/Hr)) = 0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.869

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

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	102.218	19.881	5.588
2	0.167	204.436	48.554	13.647
3	0.250	306.654	15.309	4.303
4	0.333	408.872	6.946	1.952
5	0.417	511.090	3.888	1.093
6	0.500	613.308	2.508	0.705
7	0.583	715.526	1.531	0.430
8	0.667	817.744	1.382	0.388
		Sum = 100.000	Sum=	28.108

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.023	(0.394)	0.020	0.003
2	0.17	0.07	0.023	(0.392)	0.020	0.003
3	0.25	0.07	0.023	(0.391)	0.020	0.003
4	0.33	0.10	0.035	(0.389)	0.030	0.005
5	0.42	0.10	0.035	(0.388)	0.030	0.005
6	0.50	0.10	0.035	(0.386)	0.030	0.005
7	0.58	0.10	0.035	(0.385)	0.030	0.005
8	0.67	0.10	0.035	(0.383)	0.030	0.005
9	0.75	0.10	0.035	(0.382)	0.030	0.005
10	0.83	0.13	0.047	(0.380)	0.040	0.006
11	0.92	0.13	0.047	(0.379)	0.040	0.006
12	1.00	0.13	0.047	(0.377)	0.040	0.006
13	1.08	0.10	0.035	(0.376)	0.030	0.005
14	1.17	0.10	0.035	(0.374)	0.030	0.005
15	1.25	0.10	0.035	(0.373)	0.030	0.005
16	1.33	0.10	0.035	(0.371)	0.030	0.005
17	1.42	0.10	0.035	(0.370)	0.030	0.005
18	1.50	0.10	0.035	(0.368)	0.030	0.005

19	1.58	0.10	0.035	(0.367)	0.030	0.005
20	1.67	0.10	0.035	(0.366)	0.030	0.005
21	1.75	0.10	0.035	(0.364)	0.030	0.005
22	1.83	0.13	0.047	(0.363)	0.040	0.006
23	1.92	0.13	0.047	(0.361)	0.040	0.006
24	2.00	0.13	0.047	(0.360)	0.040	0.006
25	2.08	0.13	0.047	(0.358)	0.040	0.006
26	2.17	0.13	0.047	(0.357)	0.040	0.006
27	2.25	0.13	0.047	(0.355)	0.040	0.006
28	2.33	0.13	0.047	(0.354)	0.040	0.006
29	2.42	0.13	0.047	(0.352)	0.040	0.006
30	2.50	0.13	0.047	(0.351)	0.040	0.006
31	2.58	0.17	0.058	(0.350)	0.051	0.008
32	2.67	0.17	0.058	(0.348)	0.051	0.008
33	2.75	0.17	0.058	(0.347)	0.051	0.008
34	2.83	0.17	0.058	(0.345)	0.051	0.008
35	2.92	0.17	0.058	(0.344)	0.051	0.008
36	3.00	0.17	0.058	(0.342)	0.051	0.008
37	3.08	0.17	0.058	(0.341)	0.051	0.008
38	3.17	0.17	0.058	(0.340)	0.051	0.008
39	3.25	0.17	0.058	(0.338)	0.051	0.008
40	3.33	0.17	0.058	(0.337)	0.051	0.008
41	3.42	0.17	0.058	(0.335)	0.051	0.008
42	3.50	0.17	0.058	(0.334)	0.051	0.008
43	3.58	0.17	0.058	(0.333)	0.051	0.008
44	3.67	0.17	0.058	(0.331)	0.051	0.008
45	3.75	0.17	0.058	(0.330)	0.051	0.008
46	3.83	0.20	0.070	(0.328)	0.061	0.009
47	3.92	0.20	0.070	(0.327)	0.061	0.009
48	4.00	0.20	0.070	(0.326)	0.061	0.009
49	4.08	0.20	0.070	(0.324)	0.061	0.009
50	4.17	0.20	0.070	(0.323)	0.061	0.009
51	4.25	0.20	0.070	(0.321)	0.061	0.009
52	4.33	0.23	0.081	(0.320)	0.071	0.011
53	4.42	0.23	0.081	(0.319)	0.071	0.011
54	4.50	0.23	0.081	(0.317)	0.071	0.011
55	4.58	0.23	0.081	(0.316)	0.071	0.011
56	4.67	0.23	0.081	(0.315)	0.071	0.011
57	4.75	0.23	0.081	(0.313)	0.071	0.011
58	4.83	0.27	0.093	(0.312)	0.081	0.012
59	4.92	0.27	0.093	(0.311)	0.081	0.012
60	5.00	0.27	0.093	(0.309)	0.081	0.012
61	5.08	0.20	0.070	(0.308)	0.061	0.009
62	5.17	0.20	0.070	(0.307)	0.061	0.009
63	5.25	0.20	0.070	(0.305)	0.061	0.009
64	5.33	0.23	0.081	(0.304)	0.071	0.011
65	5.42	0.23	0.081	(0.303)	0.071	0.011
66	5.50	0.23	0.081	(0.301)	0.071	0.011
67	5.58	0.27	0.093	(0.300)	0.081	0.012
68	5.67	0.27	0.093	(0.299)	0.081	0.012
69	5.75	0.27	0.093	(0.297)	0.081	0.012
70	5.83	0.27	0.093	(0.296)	0.081	0.012
71	5.92	0.27	0.093	(0.295)	0.081	0.012
72	6.00	0.27	0.093	(0.293)	0.081	0.012
73	6.08	0.30	0.105	(0.292)	0.091	0.014
74	6.17	0.30	0.105	(0.291)	0.091	0.014
75	6.25	0.30	0.105	(0.289)	0.091	0.014
76	6.33	0.30	0.105	(0.288)	0.091	0.014
77	6.42	0.30	0.105	(0.287)	0.091	0.014
78	6.50	0.30	0.105	(0.286)	0.091	0.014
79	6.58	0.33	0.116	(0.284)	0.101	0.015
80	6.67	0.33	0.116	(0.283)	0.101	0.015
81	6.75	0.33	0.116	(0.282)	0.101	0.015

82	6.83	0.33	0.116	(0.280)	0.101	0.015
83	6.92	0.33	0.116	(0.279)	0.101	0.015
84	7.00	0.33	0.116	(0.278)	0.101	0.015
85	7.08	0.33	0.116	(0.277)	0.101	0.015
86	7.17	0.33	0.116	(0.275)	0.101	0.015
87	7.25	0.33	0.116	(0.274)	0.101	0.015
88	7.33	0.37	0.128	(0.273)	0.111	0.017
89	7.42	0.37	0.128	(0.272)	0.111	0.017
90	7.50	0.37	0.128	(0.270)	0.111	0.017
91	7.58	0.40	0.140	(0.269)	0.121	0.018
92	7.67	0.40	0.140	(0.268)	0.121	0.018
93	7.75	0.40	0.140	(0.267)	0.121	0.018
94	7.83	0.43	0.151	(0.265)	0.131	0.020
95	7.92	0.43	0.151	(0.264)	0.131	0.020
96	8.00	0.43	0.151	(0.263)	0.131	0.020
97	8.08	0.50	0.175	(0.262)	0.152	0.023
98	8.17	0.50	0.175	(0.261)	0.152	0.023
99	8.25	0.50	0.175	(0.259)	0.152	0.023
100	8.33	0.50	0.175	(0.258)	0.152	0.023
101	8.42	0.50	0.175	(0.257)	0.152	0.023
102	8.50	0.50	0.175	(0.256)	0.152	0.023
103	8.58	0.53	0.186	(0.255)	0.162	0.024
104	8.67	0.53	0.186	(0.253)	0.162	0.024
105	8.75	0.53	0.186	(0.252)	0.162	0.024
106	8.83	0.57	0.198	(0.251)	0.172	0.026
107	8.92	0.57	0.198	(0.250)	0.172	0.026
108	9.00	0.57	0.198	(0.249)	0.172	0.026
109	9.08	0.63	0.221	(0.247)	0.192	0.029
110	9.17	0.63	0.221	(0.246)	0.192	0.029
111	9.25	0.63	0.221	(0.245)	0.192	0.029
112	9.33	0.67	0.233	(0.244)	0.202	0.031
113	9.42	0.67	0.233	(0.243)	0.202	0.031
114	9.50	0.67	0.233	(0.242)	0.202	0.031
115	9.58	0.70	0.244	(0.240)	0.212	0.032
116	9.67	0.70	0.244	(0.239)	0.212	0.032
117	9.75	0.70	0.244	(0.238)	0.212	0.032
118	9.83	0.73	0.256	(0.237)	0.223	0.034
119	9.92	0.73	0.256	(0.236)	0.223	0.034
120	10.00	0.73	0.256	(0.235)	0.223	0.034
121	10.08	0.50	0.175	(0.234)	0.152	0.023
122	10.17	0.50	0.175	(0.232)	0.152	0.023
123	10.25	0.50	0.175	(0.231)	0.152	0.023
124	10.33	0.50	0.175	(0.230)	0.152	0.023
125	10.42	0.50	0.175	(0.229)	0.152	0.023
126	10.50	0.50	0.175	(0.228)	0.152	0.023
127	10.58	0.67	0.233	(0.227)	0.202	0.031
128	10.67	0.67	0.233	(0.226)	0.202	0.031
129	10.75	0.67	0.233	(0.225)	0.202	0.031
130	10.83	0.67	0.233	(0.224)	0.202	0.031
131	10.92	0.67	0.233	(0.222)	0.202	0.031
132	11.00	0.67	0.233	(0.221)	0.202	0.031
133	11.08	0.63	0.221	(0.220)	0.192	0.029
134	11.17	0.63	0.221	(0.219)	0.192	0.029
135	11.25	0.63	0.221	(0.218)	0.192	0.029
136	11.33	0.63	0.221	(0.217)	0.192	0.029
137	11.42	0.63	0.221	(0.216)	0.192	0.029
138	11.50	0.63	0.221	(0.215)	0.192	0.029
139	11.58	0.57	0.198	(0.214)	0.172	0.026
140	11.67	0.57	0.198	(0.213)	0.172	0.026
141	11.75	0.57	0.198	(0.212)	0.172	0.026
142	11.83	0.60	0.210	(0.211)	0.182	0.027
143	11.92	0.60	0.210	(0.210)	0.182	0.027
144	12.00	0.60	0.210	(0.208)	0.182	0.027

145	12.08	0.83	0.291		0.207	(	0.253)		0.084
146	12.17	0.83	0.291		0.206	(	0.253)		0.085
147	12.25	0.83	0.291		0.205	(	0.253)		0.086
148	12.33	0.87	0.303		0.204	(	0.263)		0.098
149	12.42	0.87	0.303		0.203	(	0.263)		0.099
150	12.50	0.87	0.303		0.202	(	0.263)		0.100
151	12.58	0.93	0.326		0.201	(	0.283)		0.125
152	12.67	0.93	0.326		0.200	(	0.283)		0.126
153	12.75	0.93	0.326		0.199	(	0.283)		0.127
154	12.83	0.97	0.338		0.198	(	0.293)		0.139
155	12.92	0.97	0.338		0.197	(	0.293)		0.140
156	13.00	0.97	0.338		0.196	(	0.293)		0.141
157	13.08	1.13	0.396		0.195	(	0.344)		0.201
158	13.17	1.13	0.396		0.194	(	0.344)		0.202
159	13.25	1.13	0.396		0.193	(	0.344)		0.203
160	13.33	1.13	0.396		0.192	(	0.344)		0.204
161	13.42	1.13	0.396		0.191	(	0.344)		0.205
162	13.50	1.13	0.396		0.190	(	0.344)		0.205
163	13.58	0.77	0.268		0.189	(	0.233)		0.078
164	13.67	0.77	0.268		0.188	(	0.233)		0.079
165	13.75	0.77	0.268		0.187	(	0.233)		0.080
166	13.83	0.77	0.268		0.187	(	0.233)		0.081
167	13.92	0.77	0.268		0.186	(	0.233)		0.082
168	14.00	0.77	0.268		0.185	(	0.233)		0.083
169	14.08	0.90	0.314		0.184	(	0.273)		0.131
170	14.17	0.90	0.314		0.183	(	0.273)		0.132
171	14.25	0.90	0.314		0.182	(	0.273)		0.133
172	14.33	0.87	0.303		0.181	(	0.263)		0.122
173	14.42	0.87	0.303		0.180	(	0.263)		0.123
174	14.50	0.87	0.303		0.179	(	0.263)		0.124
175	14.58	0.87	0.303		0.178	(	0.263)		0.125
176	14.67	0.87	0.303		0.177	(	0.263)		0.126
177	14.75	0.87	0.303		0.176	(	0.263)		0.126
178	14.83	0.83	0.291		0.175	(	0.253)		0.116
179	14.92	0.83	0.291		0.174	(	0.253)		0.117
180	15.00	0.83	0.291		0.174	(	0.253)		0.117
181	15.08	0.80	0.279		0.173	(	0.243)		0.107
182	15.17	0.80	0.279		0.172	(	0.243)		0.108
183	15.25	0.80	0.279		0.171	(	0.243)		0.109
184	15.33	0.77	0.268		0.170	(	0.233)		0.098
185	15.42	0.77	0.268		0.169	(	0.233)		0.099
186	15.50	0.77	0.268		0.168	(	0.233)		0.099
187	15.58	0.63	0.221		0.167	(	0.192)		0.054
188	15.67	0.63	0.221		0.167	(	0.192)		0.055
189	15.75	0.63	0.221		0.166	(	0.192)		0.055
190	15.83	0.63	0.221		0.165	(	0.192)		0.056
191	15.92	0.63	0.221		0.164	(	0.192)		0.057
192	16.00	0.63	0.221		0.163	(	0.192)		0.058
193	16.08	0.13	0.047	(	0.162)		0.040		0.006
194	16.17	0.13	0.047	(	0.162)		0.040		0.006
195	16.25	0.13	0.047	(	0.161)		0.040		0.006
196	16.33	0.13	0.047	(	0.160)		0.040		0.006
197	16.42	0.13	0.047	(	0.159)		0.040		0.006
198	16.50	0.13	0.047	(	0.158)		0.040		0.006
199	16.58	0.10	0.035	(	0.157)		0.030		0.005
200	16.67	0.10	0.035	(	0.157)		0.030		0.005
201	16.75	0.10	0.035	(	0.156)		0.030		0.005
202	16.83	0.10	0.035	(	0.155)		0.030		0.005
203	16.92	0.10	0.035	(	0.154)		0.030		0.005
204	17.00	0.10	0.035	(	0.154)		0.030		0.005
205	17.08	0.17	0.058	(	0.153)		0.051		0.008
206	17.17	0.17	0.058	(	0.152)		0.051		0.008
207	17.25	0.17	0.058	(	0.151)		0.051		0.008

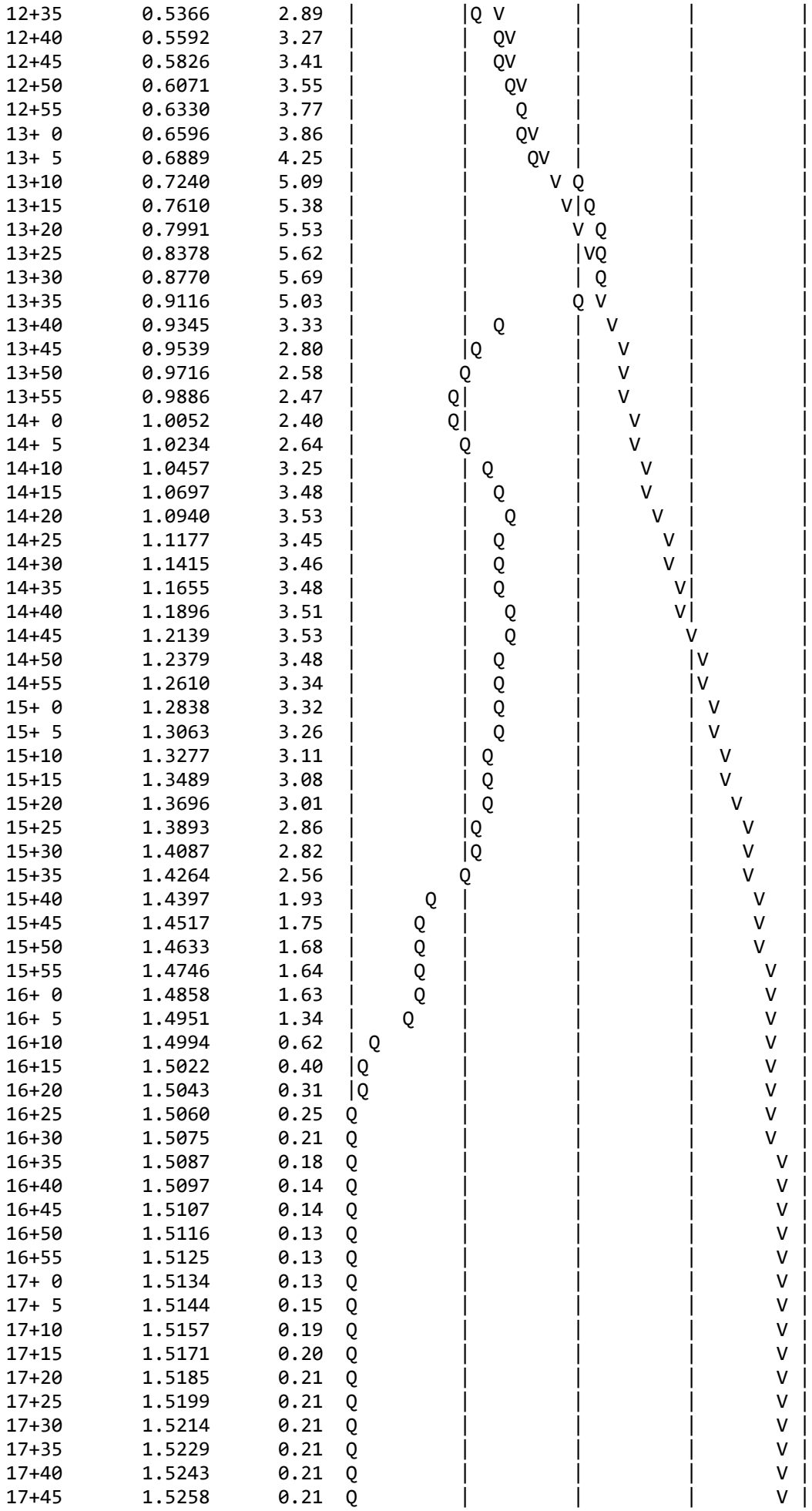
208	17.33	0.17	0.058	(0.150)	0.051	0.008
209	17.42	0.17	0.058	(0.150)	0.051	0.008
210	17.50	0.17	0.058	(0.149)	0.051	0.008
211	17.58	0.17	0.058	(0.148)	0.051	0.008
212	17.67	0.17	0.058	(0.147)	0.051	0.008
213	17.75	0.17	0.058	(0.147)	0.051	0.008
214	17.83	0.13	0.047	(0.146)	0.040	0.006
215	17.92	0.13	0.047	(0.145)	0.040	0.006
216	18.00	0.13	0.047	(0.145)	0.040	0.006
217	18.08	0.13	0.047	(0.144)	0.040	0.006
218	18.17	0.13	0.047	(0.143)	0.040	0.006
219	18.25	0.13	0.047	(0.142)	0.040	0.006
220	18.33	0.13	0.047	(0.142)	0.040	0.006
221	18.42	0.13	0.047	(0.141)	0.040	0.006
222	18.50	0.13	0.047	(0.140)	0.040	0.006
223	18.58	0.10	0.035	(0.140)	0.030	0.005
224	18.67	0.10	0.035	(0.139)	0.030	0.005
225	18.75	0.10	0.035	(0.138)	0.030	0.005
226	18.83	0.07	0.023	(0.138)	0.020	0.003
227	18.92	0.07	0.023	(0.137)	0.020	0.003
228	19.00	0.07	0.023	(0.136)	0.020	0.003
229	19.08	0.10	0.035	(0.136)	0.030	0.005
230	19.17	0.10	0.035	(0.135)	0.030	0.005
231	19.25	0.10	0.035	(0.134)	0.030	0.005
232	19.33	0.13	0.047	(0.134)	0.040	0.006
233	19.42	0.13	0.047	(0.133)	0.040	0.006
234	19.50	0.13	0.047	(0.133)	0.040	0.006
235	19.58	0.10	0.035	(0.132)	0.030	0.005
236	19.67	0.10	0.035	(0.131)	0.030	0.005
237	19.75	0.10	0.035	(0.131)	0.030	0.005
238	19.83	0.07	0.023	(0.130)	0.020	0.003
239	19.92	0.07	0.023	(0.130)	0.020	0.003
240	20.00	0.07	0.023	(0.129)	0.020	0.003
241	20.08	0.10	0.035	(0.128)	0.030	0.005
242	20.17	0.10	0.035	(0.128)	0.030	0.005
243	20.25	0.10	0.035	(0.127)	0.030	0.005
244	20.33	0.10	0.035	(0.127)	0.030	0.005
245	20.42	0.10	0.035	(0.126)	0.030	0.005
246	20.50	0.10	0.035	(0.126)	0.030	0.005
247	20.58	0.10	0.035	(0.125)	0.030	0.005
248	20.67	0.10	0.035	(0.125)	0.030	0.005
249	20.75	0.10	0.035	(0.124)	0.030	0.005
250	20.83	0.07	0.023	(0.124)	0.020	0.003
251	20.92	0.07	0.023	(0.123)	0.020	0.003
252	21.00	0.07	0.023	(0.123)	0.020	0.003
253	21.08	0.10	0.035	(0.122)	0.030	0.005
254	21.17	0.10	0.035	(0.122)	0.030	0.005
255	21.25	0.10	0.035	(0.121)	0.030	0.005
256	21.33	0.07	0.023	(0.121)	0.020	0.003
257	21.42	0.07	0.023	(0.120)	0.020	0.003
258	21.50	0.07	0.023	(0.120)	0.020	0.003
259	21.58	0.10	0.035	(0.119)	0.030	0.005
260	21.67	0.10	0.035	(0.119)	0.030	0.005
261	21.75	0.10	0.035	(0.119)	0.030	0.005
262	21.83	0.07	0.023	(0.118)	0.020	0.003
263	21.92	0.07	0.023	(0.118)	0.020	0.003
264	22.00	0.07	0.023	(0.117)	0.020	0.003
265	22.08	0.10	0.035	(0.117)	0.030	0.005
266	22.17	0.10	0.035	(0.117)	0.030	0.005
267	22.25	0.10	0.035	(0.116)	0.030	0.005
268	22.33	0.07	0.023	(0.116)	0.020	0.003
269	22.42	0.07	0.023	(0.115)	0.020	0.003
270	22.50	0.07	0.023	(0.115)	0.020	0.003

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271  22.58     0.07      0.023       (  0.115)       0.020        0.003
272  22.67     0.07      0.023       (  0.114)       0.020        0.003
273  22.75     0.07      0.023       (  0.114)       0.020        0.003
274  22.83     0.07      0.023       (  0.114)       0.020        0.003
275  22.92     0.07      0.023       (  0.114)       0.020        0.003
276  23.00     0.07      0.023       (  0.113)       0.020        0.003
277  23.08     0.07      0.023       (  0.113)       0.020        0.003
278  23.17     0.07      0.023       (  0.113)       0.020        0.003
279  23.25     0.07      0.023       (  0.113)       0.020        0.003
280  23.33     0.07      0.023       (  0.112)       0.020        0.003
281  23.42     0.07      0.023       (  0.112)       0.020        0.003
282  23.50     0.07      0.023       (  0.112)       0.020        0.003
283  23.58     0.07      0.023       (  0.112)       0.020        0.003
284  23.67     0.07      0.023       (  0.112)       0.020        0.003
285  23.75     0.07      0.023       (  0.111)       0.020        0.003
286  23.83     0.07      0.023       (  0.111)       0.020        0.003
287  23.92     0.07      0.023       (  0.111)       0.020        0.003
288  24.00     0.07      0.023       (  0.111)       0.020        0.003
               (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     8.2
       Flood volume = Effective rainfall      0.68(In)
        times area      27.9(Ac.)/[(In)/(Ft.)] =       1.6(Ac.Ft)
       Total soil loss =      2.23(In)
       Total soil loss =     5.177(Ac.Ft)
       Total rainfall =      2.91(In)
       Flood volume =       69149.6 Cubic Feet
       Total soil loss =      225526.0 Cubic Feet
       ------------------------------------------------------------------------
        Peak flow rate of this hydrograph =      5.691(CFS)
       ------------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0001      0.02  Q         |         |         |         |
   0+10       0.0005      0.06  Q         |         |         |         |
   0+15       0.0010      0.07  Q         |         |         |         |
   0+20       0.0016      0.09  Q         |         |         |         |
   0+25       0.0024      0.11  Q         |         |         |         |
   0+30       0.0032      0.12  Q         |         |         |         |
   0+35       0.0040      0.12  Q         |         |         |         |
   0+40       0.0049      0.13  Q         |         |         |         |
   0+45       0.0058      0.13  Q         |         |         |         |
   0+50       0.0067      0.14  Q         |         |         |         |
   0+55       0.0078      0.16  Q         |         |         |         |
   1+ 0       0.0090      0.16  Q         |         |         |         |
   1+ 5       0.0101      0.16  Q         |         |         |         |
   1+10       0.0110      0.14  Q         |         |         |         |
   1+15       0.0120      0.13  Q         |         |         |         |
   1+20       0.0129      0.13  Q         |         |         |         |
   1+25       0.0138      0.13  Q         |         |         |         |
   1+30       0.0147      0.13  Q         |         |         |         |
   1+35       0.0156      0.13  Q         |         |         |         |
   1+40       0.0164      0.13  Q         |         |         |         |
   1+45       0.0173      0.13  Q         |         |         |         |
   1+50       0.0183      0.14  Q         |         |         |         |
   1+55       0.0194      0.16  Q         |         |         |         |
   2+ 0       0.0205      0.16  Q         |         |         |         |
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2+ 5	0.0217	0.17	Q				
2+10	0.0228	0.17	Q				
2+15	0.0240	0.17	Q				
2+20	0.0252	0.17	Q				
2+25	0.0264	0.17	Q				
2+30	0.0275	0.17	Q				
2+35	0.0288	0.18	Q				
2+40	0.0302	0.20	Q				
2+45	0.0316	0.21	Q				
2+50	0.0331	0.21	Q				
2+55	0.0345	0.21	Q				
3+ 0	0.0360	0.21	Q				
3+ 5	0.0375	0.21	Q				
3+10	0.0389	0.21	Q				
3+15	0.0404	0.21	QV				
3+20	0.0419	0.21	QV				
3+25	0.0434	0.21	QV				
3+30	0.0449	0.21	QV				
3+35	0.0463	0.21	QV				
3+40	0.0478	0.21	QV				
3+45	0.0493	0.21	QV				
3+50	0.0508	0.22	QV				
3+55	0.0525	0.24	QV				
4+ 0	0.0543	0.25	|Q				
4+ 5	0.0560	0.25	|Q				
4+10	0.0578	0.26	|Q				
4+15	0.0595	0.26	|Q				
4+20	0.0614	0.27	|Q				
4+25	0.0633	0.29	|Q				
4+30	0.0654	0.29	|Q				
4+35	0.0674	0.30	|Q				
4+40	0.0695	0.30	|Q				
4+45	0.0715	0.30	|Q				
4+50	0.0736	0.31	|Q				
4+55	0.0759	0.33	|Q				
5+ 0	0.0782	0.34	|Q				
5+ 5	0.0805	0.32	|QV				
5+10	0.0824	0.28	|QV				
5+15	0.0843	0.27	|QV				
5+20	0.0861	0.27	|QV				
5+25	0.0882	0.29	|QV				
5+30	0.0902	0.30	|QV				
5+35	0.0923	0.31	|QV				
5+40	0.0946	0.33	|QV				
5+45	0.0969	0.34	|QV				
5+50	0.0992	0.34	|QV				
5+55	0.1016	0.34	|QV				
6+ 0	0.1039	0.34	|QV				
6+ 5	0.1063	0.35	|QV				
6+10	0.1089	0.37	|QV				
6+15	0.1115	0.38	|QV				
6+20	0.1142	0.38	|QV				
6+25	0.1168	0.38	|QV				
6+30	0.1195	0.39	|Q V				
6+35	0.1222	0.39	|Q V				
6+40	0.1250	0.42	|Q V				
6+45	0.1280	0.42	|Q V				
6+50	0.1309	0.43	|Q V				
6+55	0.1338	0.43	|Q V				
7+ 0	0.1368	0.43	|Q V				
7+ 5	0.1397	0.43	|Q V				
7+10	0.1427	0.43	|Q V				
7+15	0.1456	0.43	|Q V				

7+20	0.1487	0.44	Q V			
7+25	0.1518	0.46	Q V			
7+30	0.1550	0.47	Q V			
7+35	0.1583	0.48	Q V			
7+40	0.1618	0.50	Q V			
7+45	0.1653	0.51	Q V			
7+50	0.1688	0.52	Q V			
7+55	0.1726	0.54	Q V			
8+ 0	0.1764	0.55	Q V			
8+ 5	0.1803	0.57	Q V			
8+10	0.1845	0.61	Q V			
8+15	0.1889	0.63	Q V			
8+20	0.1932	0.64	Q V			
8+25	0.1976	0.64	Q V			
8+30	0.2021	0.64	Q V			
8+35	0.2065	0.65	Q V			
8+40	0.2112	0.67	Q V			
8+45	0.2159	0.68	Q V			
8+50	0.2206	0.69	Q V			
8+55	0.2256	0.71	Q V			
9+ 0	0.2305	0.72	Q V			
9+ 5	0.2356	0.74	Q V			
9+10	0.2411	0.79	Q V			
9+15	0.2466	0.80	Q V			
9+20	0.2522	0.82	Q V			
9+25	0.2580	0.84	Q V			
9+30	0.2638	0.85	Q V			
9+35	0.2698	0.86	Q V			
9+40	0.2759	0.89	Q V			
9+45	0.2820	0.89	Q V			
9+50	0.2883	0.91	Q V			
9+55	0.2947	0.93	Q V			
10+ 0	0.3011	0.94	Q V			
10+ 5	0.3072	0.88	Q V			
10+10	0.3123	0.74	Q V			
10+15	0.3170	0.69	Q V			
10+20	0.3217	0.67	Q V			
10+25	0.3262	0.66	Q V			
10+30	0.3307	0.65	Q V			
10+35	0.3355	0.69	Q V			
10+40	0.3409	0.79	Q V			
10+45	0.3466	0.82	Q V			
10+50	0.3524	0.84	Q V			
10+55	0.3582	0.85	Q V			
11+ 0	0.3641	0.85	Q V			
11+ 5	0.3699	0.85	Q V			
11+10	0.3756	0.83	Q V			
11+15	0.3813	0.82	Q V			
11+20	0.3870	0.82	Q V			
11+25	0.3926	0.82	Q V			
11+30	0.3982	0.82	Q V			
11+35	0.4037	0.80	Q V			
11+40	0.4090	0.76	Q V			
11+45	0.4141	0.74	Q V			
11+50	0.4192	0.75	Q V			
11+55	0.4245	0.76	Q V			
12+ 0	0.4298	0.77	Q V			
12+ 5	0.4372	1.08	Q V			
12+10	0.4500	1.86	Q V			
12+15	0.4646	2.12	Q V			
12+20	0.4806	2.32	Q V			
12+25	0.4983	2.57	Q V			
12+30	0.5168	2.68	Q V			



12+35	0.5366	2.89	|Q V | | |
12+40	0.5592	3.27	| QV | | |
12+45	0.5826	3.41	| QV | | |
12+50	0.6071	3.55	| QV | | |
12+55	0.6330	3.77	| Q | | |
13+ 0	0.6596	3.86	| QV | | |
13+ 5	0.6889	4.25	| QV | | |
13+10	0.7240	5.09	| V Q | |
13+15	0.7610	5.38	| V|Q | |
13+20	0.7991	5.53	| V Q | |
13+25	0.8378	5.62	| |VQ | |
13+30	0.8770	5.69	| | Q | |
13+35	0.9116	5.03	| Q V | |
13+40	0.9345	3.33	| Q | V | |
13+45	0.9539	2.80	|Q | V | |
13+50	0.9716	2.58	Q | V | |
13+55	0.9886	2.47	Q| | V | |
14+ 0	1.0052	2.40	Q| | V | |
14+ 5	1.0234	2.64	Q | V | |
14+10	1.0457	3.25	| Q | V | |
14+15	1.0697	3.48	| Q | V | |
14+20	1.0940	3.53	| Q | V | |
14+25	1.1177	3.45	| Q | V | |
14+30	1.1415	3.46	| Q | V | |
14+35	1.1655	3.48	| Q | V| |
14+40	1.1896	3.51	| Q | V| |
14+45	1.2139	3.53	| Q | V |
14+50	1.2379	3.48	| Q | |V |
14+55	1.2610	3.34	| Q | |V |
15+ 0	1.2838	3.32	| Q | | V |
15+ 5	1.3063	3.26	| Q | | V |
15+10	1.3277	3.11	| Q | | V |
15+15	1.3489	3.08	| Q | | V |
15+20	1.3696	3.01	| Q | | V |
15+25	1.3893	2.86	|Q | | V |
15+30	1.4087	2.82	|Q | | V |
15+35	1.4264	2.56	Q | | V |
15+40	1.4397	1.93	Q | | | V |
15+45	1.4517	1.75	Q | | | V |
15+50	1.4633	1.68	Q | | | V |
15+55	1.4746	1.64	Q | | | V |
16+ 0	1.4858	1.63	Q | | | V |
16+ 5	1.4951	1.34	Q | | | V |
16+10	1.4994	0.62	Q | | | V |
16+15	1.5022	0.40	|Q | | | V |
16+20	1.5043	0.31	|Q | | | V |
16+25	1.5060	0.25	Q | | | V |
16+30	1.5075	0.21	Q | | | V |
16+35	1.5087	0.18	Q | | | V |
16+40	1.5097	0.14	Q | | | V |
16+45	1.5107	0.14	Q | | | V |
16+50	1.5116	0.13	Q | | | V |
16+55	1.5125	0.13	Q | | | V |
17+ 0	1.5134	0.13	Q | | | V |
17+ 5	1.5144	0.15	Q | | | V |
17+10	1.5157	0.19	Q | | | V |
17+15	1.5171	0.20	Q | | | V |
17+20	1.5185	0.21	Q | | | V |
17+25	1.5199	0.21	Q | | | V |
17+30	1.5214	0.21	Q | | | V |
17+35	1.5229	0.21	Q | | | V |
17+40	1.5243	0.21	Q | | | V |
17+45	1.5258	0.21	Q | | | V |

17+50	1.5272	0.21	Q	|	|	|	V |
17+55	1.5285	0.19	Q	|	|	|	V |
18+ 0	1.5297	0.18	Q	|	|	|	V |
18+ 5	1.5310	0.18	Q	|	|	|	V |
18+10	1.5322	0.17	Q	|	|	|	V |
18+15	1.5333	0.17	Q	|	|	|	V |
18+20	1.5345	0.17	Q	|	|	|	V |
18+25	1.5357	0.17	Q	|	|	|	V |
18+30	1.5369	0.17	Q	|	|	|	V |
18+35	1.5380	0.16	Q	|	|	|	V |
18+40	1.5390	0.14	Q	|	|	|	V |
18+45	1.5399	0.14	Q	|	|	|	V |
18+50	1.5408	0.12	Q	|	|	|	V |
18+55	1.5415	0.10	Q	|	|	|	V |
19+ 0	1.5421	0.09	Q	|	|	|	V |
19+ 5	1.5428	0.10	Q	|	|	|	V |
19+10	1.5436	0.12	Q	|	|	|	V |
19+15	1.5445	0.12	Q	|	|	|	V |
19+20	1.5454	0.13	Q	|	|	|	V |
19+25	1.5465	0.16	Q	|	|	|	V |
19+30	1.5476	0.16	Q	|	|	|	V |
19+35	1.5487	0.16	Q	|	|	|	V|
19+40	1.5497	0.14	Q	|	|	|	V|
19+45	1.5506	0.13	Q	|	|	|	V|
19+50	1.5514	0.12	Q	|	|	|	V|
19+55	1.5522	0.10	Q	|	|	|	V|
20+ 0	1.5528	0.09	Q	|	|	|	V|
20+ 5	1.5535	0.10	Q	|	|	|	V|
20+10	1.5543	0.12	Q	|	|	|	V|
20+15	1.5551	0.12	Q	|	|	|	V|
20+20	1.5560	0.13	Q	|	|	|	V|
20+25	1.5569	0.13	Q	|	|	|	V|
20+30	1.5578	0.13	Q	|	|	|	V|
20+35	1.5586	0.13	Q	|	|	|	V|
20+40	1.5595	0.13	Q	|	|	|	V|
20+45	1.5604	0.13	Q	|	|	|	V|
20+50	1.5612	0.12	Q	|	|	|	V|
20+55	1.5619	0.10	Q	|	|	|	V|
21+ 0	1.5626	0.09	Q	|	|	|	V|
21+ 5	1.5632	0.10	Q	|	|	|	V|
21+10	1.5641	0.12	Q	|	|	|	V|
21+15	1.5649	0.12	Q	|	|	|	V|
21+20	1.5657	0.12	Q	|	|	|	V|
21+25	1.5664	0.10	Q	|	|	|	V|
21+30	1.5670	0.09	Q	|	|	|	V|
21+35	1.5677	0.10	Q	|	|	|	V|
21+40	1.5685	0.12	Q	|	|	|	V|
21+45	1.5693	0.12	Q	|	|	|	V|
21+50	1.5701	0.12	Q	|	|	|	V|
21+55	1.5708	0.10	Q	|	|	|	V|
22+ 0	1.5714	0.09	Q	|	|	|	V|
22+ 5	1.5721	0.10	Q	|	|	|	V|
22+10	1.5729	0.12	Q	|	|	|	V|
22+15	1.5738	0.12	Q	|	|	|	V|
22+20	1.5746	0.12	Q	|	|	|	V|
22+25	1.5753	0.10	Q	|	|	|	V|
22+30	1.5759	0.09	Q	|	|	|	V|
22+35	1.5765	0.09	Q	|	|	|	V|
22+40	1.5771	0.09	Q	|	|	|	V|
22+45	1.5777	0.09	Q	|	|	|	V|
22+50	1.5783	0.09	Q	|	|	|	V|
22+55	1.5789	0.09	Q	|	|	|	V|
23+ 0	1.5795	0.09	Q	|	|	|	V|

```
  23+ 5       1.5801      0.09  Q         |         |         |         V|
  23+10       1.5807      0.09  Q         |         |         |         V|
  23+15       1.5813      0.09  Q         |         |         |         V|
  23+20       1.5819      0.09  Q         |         |         |         V|
  23+25       1.5824      0.09  Q         |         |         |         V|
  23+30       1.5830      0.09  Q         |         |         |         V|
  23+35       1.5836      0.09  Q         |         |         |         V|
  23+40       1.5842      0.09  Q         |         |         |         V|
  23+45       1.5848      0.09  Q         |         |         |         V|
  23+50       1.5854      0.09  Q         |         |         |         V|
  23+55       1.5860      0.09  Q         |         |         |         V|
  24+ 0       1.5866      0.09  Q         |         |         |         V|
  24+ 5       1.5871      0.07  Q         |         |         |         V|
  24+10       1.5872      0.03  Q         |         |         |         V|
  24+15       1.5873      0.01  Q         |         |         |         V|
  24+20       1.5874      0.01  Q         |         |         |         V|
  24+25       1.5874      0.00  Q         |         |         |         V|
  24+30       1.5874      0.00  Q         |         |         |         V|
  24+35       1.5875      0.00  Q         |         |         |          V
-------------------------------------------------------------------------
```

FLOOD ROUTING MODELS..... D

- D.1 - BASIN "A" STAGE-STORAGE-OUTFLOW SUMMARY & ROUTING
- D.2 - BASIN "B" STAGE-STORAGE-OUTFLOW SUMMARY & ROUTING

BASIN ROUTING: INTERIM

BASIN	BASIN CAPACITY	2-YEAR OUTFLOW (CFS)				2-YEAR PEAK BASIN DEPTH (FT)				10-YEAR OUTFLOW (CFS)				10-YEAR PEAK BASIN DEPTH (FT)			
		1HR	3HR	6HR	24HR	1HR	3HR	6HR	24HR	1HR	3HR	6HR	24HR	1HR	3HR	6HR	24HR
A "WEST"	4.90	0.8	0.8	0.8	0.80	5.21	5.75	6.60	6.88	0.8	0.8	7.0	7.0	6.44	7.19	8.12	8.13
B "EAST"	3.63	0.5	0.5	0.5	0.50	5.84	5.56	6.30	5.81	63.9	57.2	57.8	13.9	8.37	8.31	8.31	7.77
C "DEBRIS"	1.18	27.0	15.7	14.9	1.30	2.05	0.94	0.89	0.08	72.0	46.3	39.8	16.5	3.29	2.32	2.22	0.70
TOTAL PROPOSED OUTFLOW		**35.0**	**15.0**	**14.4**	**2.54**					**133.5**	**93.5**	**97.4**	**30.4**				

D.1 – BASIN "A" STAGE-STORAGE-OUTFLOW SUMMARY & BASIN ROUTING ANALYSIS

PROJECT: 2023.06022 Tr. 31513 "Tres Cerritos"

Extended Detention "Basin A"

Input	Basin Depth (ft)	Total Vol. (af)	*WQ Orifice Q (cfs)	Pump Outflow (cfs)	Weir 1 Outflow (cfs)	Weir 2 - Emergancy Overflow (cfs)	Total Q out (cfs)	Contour Elevation	Contour Area (sf)	Inc. Volume (cf)	Inc. Volume (af)
1	**0.00**	**0.00**					0.00	**1494.00**	1,374		
	0.33	0.02	0.00				0.00	1494.33	5,696	1,085	0.02
	0.67	0.09	0.13				0.13	1494.67	10,150	2,658	0.06
	1.00	**0.18**	0.18				**0.18**	1495.00	14,472	4,042	0.09
	1.33	0.30	0.22				0.22	1495.33	16,251	5,067	0.12
	1.67	0.43	0.25				0.25	1495.67	18,085	5,834	0.13
	2.00	**0.57**	0.28				**0.28**	1496.00	19,864	6,259	0.14
	2.33	0.73	0.31				0.31	1496.33	20,488	6,658	0.15
	2.67	0.89	0.33				0.33	1496.67	21,131	7,075	0.16
	3.00	**1.05**	0.36				**0.36**	1497.00	21,755	7,076	0.16
	3.33	1.22	0.38				0.38	1497.33	22,401	7,286	0.17
2	**3.50**	1.31		0.8			**0.8**	1497.50	22,735	3,837	0.09
	3.67	1.40		0.8			0.8	1497.67	23,068	3,893	0.09
3	**4.00**	**1.57**		0.8			**0.8**	1498.00	23,714	7,719	0.18
4	**5.00**	**2.14**		0.8			**0.8**	1499.00	25,741	24,721	0.57
5	**6.00**	**2.75**		0.8			**0.8**	1500.00	27,830	26,779	0.61
6	**7.00**	**3.42**		0.8			**0.8**	1501.00	29,973	28,895	0.66
7	**8.00**	**4.13**		0.8	0.00		**0.8**	1502.00	32,169	31,065	0.71
8	**8.50**	**4.51**		0.8	24.72	0.00	**25.5**	1502.50	33,289	16,364	0.38
9	**9.00**	**4.90**		0.8	69.93		**70.7**	1503.00	34,409	16,924	0.39
										213,233	

DCV:	57,135	CF
	1.31	AC-FT

	ac-ft		depth
X1	1.050	Y1	3.00
X2	1.31	Y2	3.50
X3	1.572	Y3	4.00

1497.50 elev.

Pump Outflow		
*Total basin dewatering within 72 hrs	196,310	cu-ft
	1,468,593	gal
	340	gpm
	0.76	cfs
*50% DCV basin dewatering within 24hrs	28,438	cu-ft
	212,743	gal
	148	gpm
	0.33	cfs

Orifice Outflow		
Q=Ca(2gh)^(1/2)		
Weir ID	No. 1	No. 2
d (in)=	2.75	60
C=	0.66	0.66
a (ft^2)=	0.041	19.635
FL INV.=	1494.33	

Rectangular Weir Flow		
Q=(Cw)(L)(H)^(3/2)		
Weir ID	No. 1	No. 2
Weir Length, L (ft)=	21	
Cw=	3.33	3.33
FL INV.=	1502.0	

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name: SP2 & Co,. Date: 7/14/2025

Designed by: Alex Jaramillo Case No: TBD

Company Project Number/Name: 2023.06022 Tract 31513 "Tres Cerritos"

BMP Identification

BMP NAME / ID: Extended Detention "Basin A"

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.69 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
A: Imp. Streets & Sidewalks	*396253*	*Concrete or Asphalt*	*1*	*0.89*	*353457.7*			
A: Imp. 3600 SFR (62%)	*443818.32*	*Roofs*	*1*	*0.89*	*395885.9*			
A: Pervious 3600 SFR (38%)	*272017.68*	*Ornamental Landscaping*	*0.1*	*0.11*	*30046.5*			
A: Imp. 6000 SFR (57%)	*194771.85*	*Roofs*	*1*	*0.89*	*173736.5*			
A: Pervious 6000 SFR (43%)	*146933.15*	*Ornamental Landscaping*	*0.1*	*0.11*	*16229.9*			
A: Pervious Landscaping	*180472*	*Ornamental Landscaping*	*0.1*	*0.11*	*19934.6*			
A: BMP Basin	*39439*	*Ornamental Landscaping*	*0.1*	*0.11*	*4356.4*			
	1673705	***Total***			***993647.5***	***0.69***	***57134.7***	***213233***

Notes:

Extended Detention Basin Design Procedure	BMP Subarea No. DMA A	Legend:	Required Entries / Calculated Cells

Company Name:	SP2 & Co.	Date:	7/15/2025
Designed by:	A. Jaramillo	County/City Case No.:	TBD

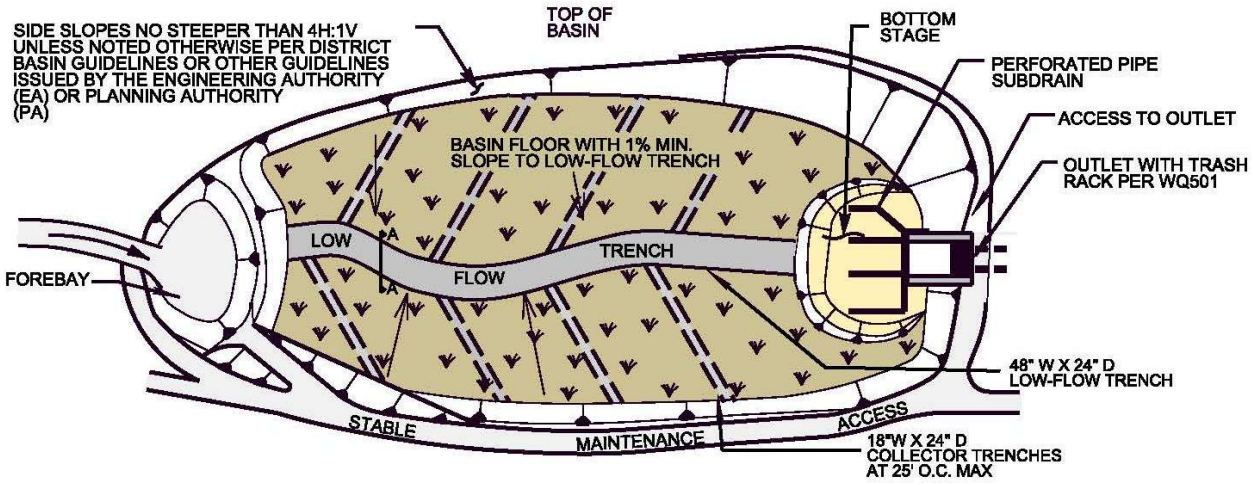
Design Volume

Tributary Area (BMP Subarea)	A_T =	38.42	acres
Enter V_{BMP}, determined from Section 2.1 of this Handbook	V_{BMP}=	57,135	ft^3

Basin Footprint

Overall Geometry

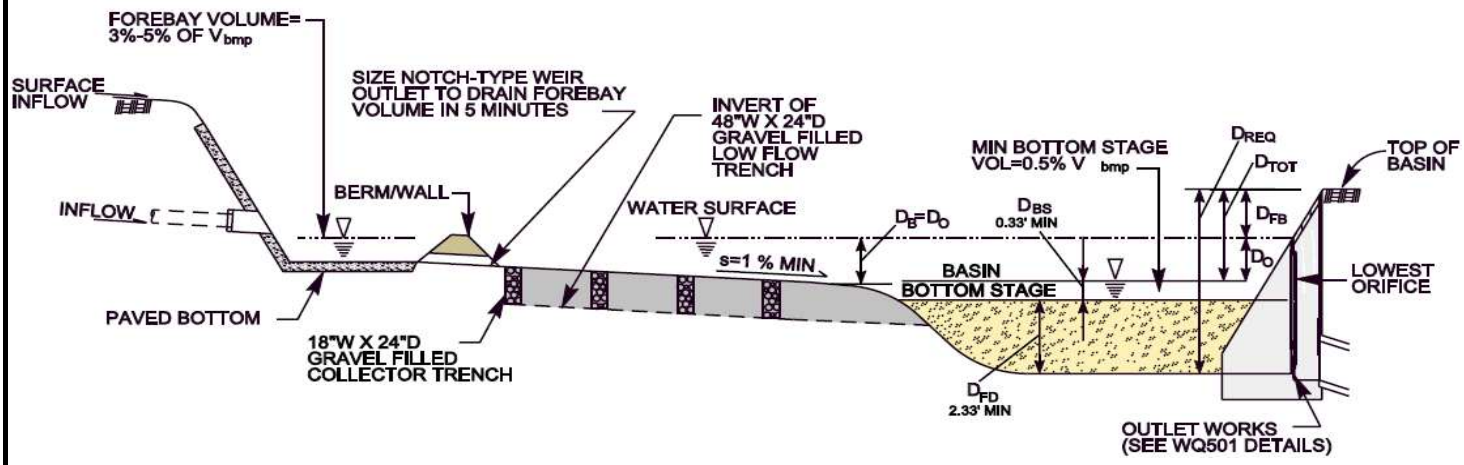
Length at Basin Bottom Surface	Length =	338	ft
Width at Basin Bottom Surface	Width =	106	ft
	Meets 1.5 : 1 requirement?	✓	
Side Slopes per "Basin Guidelines", Sect. 1.2	z =	4	:1
Proposed Basin Depth (with no freeboard)	D_B =	4.00	ft
Depth of freeboard (if used)	D_{FB} =	1.00	ft
Minimum Required Allowance for Total Depth (including proposed basin depth, freeboard, minimum depth of bottom stage (D_{BS}=0.33') and minimum filter depth (D_{FD}=2.33'))	D_{REQ} =	7.7	ft
Depth from design water surface elevation to lowest orifice	D_O =	4.0	ft



Basin Design

Basin Design

Proposed Total Basin Depth (proposed depth plus freeboard)	D_{TOT} =	5.00	ft
Basin Invert Longitudinal Slope	Slope =	1.00	%
Basin Invert Transverse Slope (1% min)	Slope =	1	%
Basin Volume	V_{Basin} =	154185	ft^3



Forebay Design

Forebay Volume (3 - 5% V_{BMP})	V_{FB} =	2290	ft^3
Forebay Depth (height of berm)	D_{FBY} =	1	ft
Minimum Forebay Surface Area	A_{FB} =	2290	ft^2
Rectangular weir (notch)	W =	8.00	in

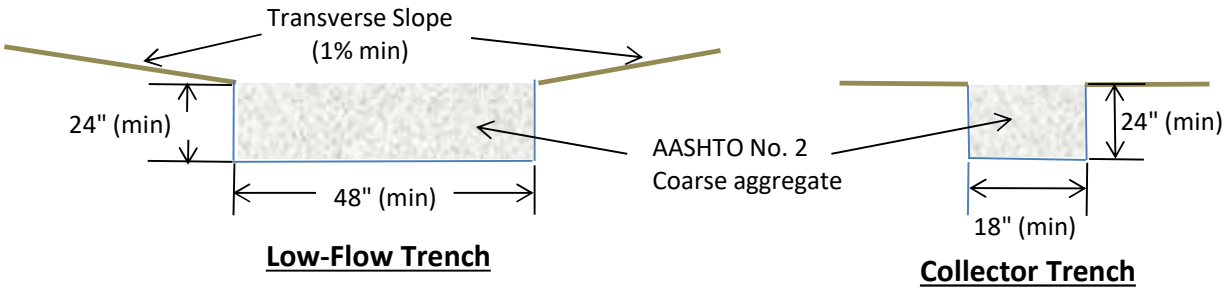
Dry Weather and Low-Flow Management

Low-Flow Trench (see graphic below)

Depth (24 inches minimum, gravel filled)	Depth =	24	inches
Width (48 inches minimum)	Width =	48	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%

Collector Trenches (see graphic below)

Depth (24 inches minimum)	Depth =	24	inches
Width (18 inches minimum)	Width =	18	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%
Spacing (25 feet on center maximum)	S =	20	feet



Low-Flow Trench **Collector Trench**

Bottom Stage (Sand Filter) Design

Depth of the Bottom Stage (4" minimum ponding)	D_{BS} =	6	in
Surface Area of Bottom Stage	A_{BS} =	515	ft^2
Dry Weather Ponded Volume (above sand layer)	V_{BS} =	258	ft^3

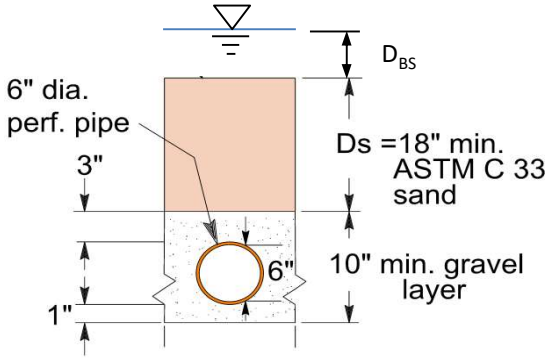
Is V_{BS} no less than 0.5% V_{BMP}? OK

Depth of ASTM-C33 sand (18 inch minimum)

Ds = 18 inches

Diameter of Subdrains: ϕ = 8 in

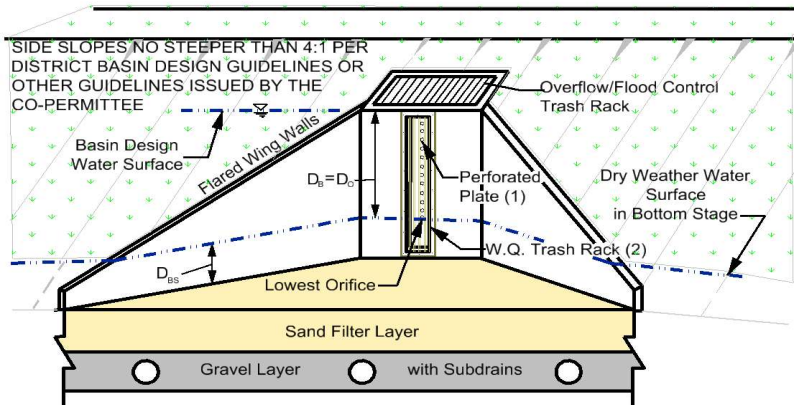
Subdrain Spacing: s = 20 ft. on center



Basin Outlet Design

Outlet Design

Assume an orifice area. Based on the information provided above, the spreadsheet provides discharge vs. stage data. Enter the volume vs. stage data for each interval. This information is used to route the volume through the basin. The size of the orifice is acceptable when the data shows that less than 50% of V_{BMP} has drained in 24 hours, and that 100% drawdown occurs within 72 hours.



Flow Rate, Q (cfs)

$$Q=CA[2g(H-H_o)]^{0.5}$$

Discharge Coefficient,

Default, C = 0.66

Other, C =

Orifice Area (ft^2)

Orifice Diameter, d; number of orifices per row, n; and number of orifice rows, N (from the bottom up).

d = 2.75 inches

n = 1 per row

N = 1 rows

Aeff = 0.041 ft^2 per row

or

Aeff = 5.937 in^2 per row

From outflow hydrograph, the time where 50% of V_{BMP} has drained from the basin (24 hour minimum):

Time (50%) = 24.30 hrs

OK

From outflow hydrograph, the time where 100% V_{BMP} has drained from the basin(within 72 hours):

Time (100 %) = 60.23 hrs

OK

Headwater Elev. / Stage (ft)	Discharge (cfs)	Volume (acre-ft)	Δt (hrs.)
0	0.0000	0.0000	
0.33	0.1260	0.020	3.84
0.67	0.1783	0.090	5.57
1.00	0.2184	0.180	5.49
1.33	0.2521	0.300	6.17
1.67	0.2819	0.430	5.89
2.00	0.3088	0.570	5.74
2.33	0.3335	0.730	6.03
2.67	0.3566	0.890	5.61
3.00	0.3782	1.050	5.27
3.33	0.3986	1.220	5.30
3.67	0.4181	1.400	5.33
4.00	*0.4367*	*1.570*	
4.33			
4.67			
5.00			
5.33			
5.67			
6.00			
6.33			
6.67			
7.00			
7.33			
7.67			
8.00			
8.33			
8.67			
9.00			
9.33			
9.67			
10.00			
		∑ =	60.23

Notes:

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 12/13/24

TRACT 31513 PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY
BASIN B "EAST"
2-YEAR
24-HOUR

Program License Serial Number 6545

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

From study/file name: TCPB242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 297
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 3.367 (CFS)
Total volume = 2.061 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 297
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 2.42(Ft.)

Initial basin depth = 2.42 (Ft.)
Initial basin storage = 0.44 (Ac.Ft)
Initial basin outflow = 0.79 (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
1.000	0.090	0.090	0.090	0.090
2.000	0.300	0.130	0.300	0.300
3.000	0.630	1.700	0.624	0.636
4.000	1.010	1.700	1.004	1.016
5.000	1.420	1.700	1.414	1.426
6.000	1.880	1.700	1.874	1.886
7.000	2.390	1.800	2.384	2.396
8.000	2.940	26.490	2.849	3.031
9.000	3.540	130.250	3.091	3.989

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 0.8 1.68 2.53 3.37	Depth (Ft.)
0.083	0.03	0.75	0.431	I O| | | | |	2.40
0.167	0.12	0.73	0.426	|I O | | | | |	2.38
0.250	0.16	0.71	0.422	|I O | | | | |	2.37
0.333	0.19	0.69	0.418	|I O | | | | |	2.36
0.417	0.25	0.68	0.415	| I O | | | | |	2.35
0.500	0.27	0.66	0.412	| I O | | | | |	2.34
0.583	0.28	0.65	0.410	| I O | | | | |	2.33
0.667	0.29	0.64	0.407	| I O | | | | |	2.33
0.750	0.29	0.63	0.405	| I O | | | | |	2.32
0.833	0.31	0.62	0.403	| I O | | | | |	2.31
0.917	0.36	0.61	0.401	| I O | | | | |	2.31
1.000	0.38	0.60	0.399	| I O | | | | |	2.30
1.083	0.37	0.59	0.398	| I O | | | | |	2.30
1.167	0.33	0.59	0.396	| I O | | | | |	2.29
1.250	0.31	0.58	0.394	| I O | | | | |	2.29
1.333	0.31	0.57	0.392	| I O | | | | |	2.28
1.417	0.31	0.56	0.391	| I O | | | | |	2.27
1.500	0.30	0.55	0.389	| I O | | | | |	2.27
1.583	0.30	0.54	0.387	| I O | | | | |	2.26
1.667	0.30	0.54	0.386	| I O | | | | |	2.26
1.750	0.30	0.53	0.384	| I O | | | | |	2.25
1.833	0.31	0.52	0.382	| I O | | | | |	2.25
1.917	0.36	0.52	0.381	| IO | | | | |	2.25
2.000	0.38	0.51	0.380	| IO | | | | |	2.24
2.083	0.39	0.51	0.379	| IO | | | | |	2.24
2.167	0.39	0.50	0.378	| IO | | | | |	2.24
2.250	0.39	0.50	0.378	| IO | | | | |	2.24
2.333	0.40	0.50	0.377	| IO | | | | |	2.23
2.417	0.40	0.49	0.376	| IO | | | | |	2.23
2.500	0.40	0.49	0.376	| IO | | | | |	2.23

2.583	0.41	0.49	0.375	IO				2.23
2.667	0.46	0.49	0.375	O				2.23
2.750	0.48	0.49	0.375	O				2.23
2.833	0.49	0.49	0.375	O				2.23
2.917	0.49	0.49	0.375	O				2.23
3.000	0.49	0.49	0.375	O				2.23
3.083	0.50	0.49	0.375	O				2.23
3.167	0.50	0.49	0.375	O				2.23
3.250	0.50	0.49	0.375	O				2.23
3.333	0.50	0.49	0.375	O				2.23
3.417	0.50	0.49	0.375	O				2.23
3.500	0.50	0.49	0.375	O				2.23
3.583	0.50	0.49	0.375	O				2.23
3.667	0.50	0.49	0.375	O				2.23
3.750	0.50	0.49	0.375	O				2.23
3.833	0.51	0.49	0.376	O				2.23
3.917	0.56	0.49	0.376	OI				2.23
4.000	0.58	0.49	0.376	OI				2.23
4.083	0.59	0.50	0.377	OI				2.23
4.167	0.59	0.50	0.378	OI				2.24
4.250	0.59	0.50	0.378	OI				2.24
4.333	0.61	0.51	0.379	OI				2.24
4.417	0.66	0.51	0.380	O I				2.24
4.500	0.68	0.51	0.381	O I				2.25
4.583	0.69	0.52	0.382	O I				2.25
4.667	0.69	0.53	0.383	O I				2.25
4.750	0.69	0.53	0.384	OI				2.26
4.833	0.71	0.54	0.385	OI				2.26
4.917	0.76	0.54	0.387	O I				2.26
5.000	0.78	0.55	0.388	O I				2.27
5.083	0.76	0.56	0.390	O I				2.27
5.167	0.67	0.56	0.391	OI				2.28
5.250	0.63	0.56	0.391	OI				2.28
5.333	0.64	0.57	0.392	OI				2.28
5.417	0.67	0.57	0.392	OI				2.28
5.500	0.69	0.57	0.393	OI				2.28
5.583	0.71	0.58	0.394	OI				2.29
5.667	0.76	0.58	0.395	O I				2.29
5.750	0.77	0.59	0.396	O I				2.29
5.833	0.78	0.59	0.398	O I				2.30
5.917	0.79	0.60	0.399	O I				2.30
6.000	0.79	0.61	0.400	O I				2.30
6.083	0.81	0.61	0.402	O I				2.31
6.167	0.86	0.62	0.403	O I				2.31
6.250	0.88	0.63	0.405	O I				2.32
6.333	0.89	0.64	0.406	O I				2.32
6.417	0.89	0.64	0.408	O I				2.33
6.500	0.89	0.65	0.410	O I				2.33
6.583	0.91	0.66	0.412	O I				2.34
6.667	0.96	0.67	0.413	O I				2.34
6.750	0.98	0.68	0.415	O I				2.35
6.833	0.99	0.69	0.417	O I				2.36

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 6.917    0.99    0.70      0.419  |      O |I      |       |       |      2.36
 7.000    0.99    0.71      0.421  |      O |I      |       |       |      2.37
 7.083    0.99    0.72      0.423  |      O |I      |       |       |      2.37
 7.167    1.00    0.73      0.425  |      O |I      |       |       |      2.38
 7.250    1.00    0.73      0.427  |      O |I      |       |       |      2.39
 7.333    1.01    0.74      0.429  |       O|I      |       |       |      2.39
 7.417    1.06    0.75      0.431  |       O| I     |       |       |      2.40
 7.500    1.08    0.76      0.433  |       O| I     |       |       |      2.40
 7.583    1.10    0.77      0.435  |       O| I     |       |       |      2.41
 7.667    1.15    0.78      0.438  |       O| I     |       |       |      2.42
 7.750    1.17    0.80      0.440  |       O|  I    |       |       |      2.42
 7.833    1.20    0.81      0.443  |       O|  I    |       |       |      2.43
 7.917    1.25    0.82      0.446  |       O|  I    |       |       |      2.44
 8.000    1.27    0.84      0.449  |       O|   I   |       |       |      2.45
 8.083    1.31    0.85      0.452  |        O   I   |       |       |      2.46
 8.167    1.41    0.87      0.455  |        O    I  |       |       |      2.47
 8.250    1.45    0.89      0.459  |        O    I  |       |       |      2.48
 8.333    1.47    0.90      0.463  |        O    I  |       |       |      2.49
 8.417    1.48    0.92      0.467  |        O     I |       |       |      2.51
 8.500    1.49    0.94      0.470  |        O     I |       |       |      2.52
 8.583    1.51    0.96      0.474  |        |O    I |       |       |      2.53
 8.667    1.56    0.98      0.478  |        |O    I |       |       |      2.54
 8.750    1.57    1.00      0.482  |        |O    I |       |       |      2.55
 8.833    1.60    1.02      0.486  |        |O     I|       |       |      2.56
 8.917    1.65    1.04      0.490  |        |O     I|       |       |      2.58
 9.000    1.67    1.06      0.494  |        | O    I|       |       |      2.59
 9.083    1.71    1.08      0.499  |        | O     I       |       |      2.60
 9.167    1.81    1.10      0.503  |        | O     |I      |       |      2.62
 9.250    1.85    1.12      0.508  |        | O     |I      |       |      2.63
 9.333    1.88    1.15      0.513  |        | O     |I      |       |      2.65
 9.417    1.94    1.17      0.519  |        |  O    | I     |       |      2.66
 9.500    1.96    1.20      0.524  |        |  O    | I     |       |      2.68
 9.583    1.99    1.22      0.529  |        |  O    | I     |       |      2.69
 9.667    2.05    1.25      0.535  |        |  O    |  I    |       |      2.71
 9.750    2.07    1.27      0.540  |        |   O   |  I    |       |      2.73
 9.833    2.10    1.30      0.546  |        |   O   |  I    |       |      2.74
 9.917    2.15    1.33      0.551  |        |   O   |   I   |       |      2.76
10.000    2.17    1.35      0.557  |        |   O   |   I   |       |      2.78
10.083    2.07    1.38      0.562  |        |    O  |  I    |       |      2.79
10.167    1.75    1.39      0.566  |        |    O  I       |       |      2.81
10.250    1.63    1.40      0.568  |        |    O I|       |       |      2.81
10.333    1.58    1.41      0.569  |        |    O I|       |       |      2.82
10.417    1.55    1.42      0.570  |        |    OI |       |       |      2.82
10.500    1.53    1.42      0.571  |        |    OI |       |       |      2.82
10.583    1.59    1.42      0.572  |        |    O I|       |       |      2.82
10.667    1.82    1.43      0.574  |        |    O  |I      |       |      2.83
10.750    1.90    1.45      0.577  |        |    O  | I     |       |      2.84
10.833    1.93    1.46      0.580  |        |    O  | I     |       |      2.85
10.917    1.96    1.48      0.583  |        |     O | I     |       |      2.86
11.000    1.97    1.49      0.586  |        |     O | I     |       |      2.87
11.083    1.97    1.51      0.590  |        |     O | I     |       |      2.88
11.167    1.93    1.52      0.593  |        |     O | I     |       |      2.89
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11.250	1.91	1.54	0.595	|	|	O | I	|	2.90
11.333	1.91	1.55	0.598	|	|	O | I	|	2.90
11.417	1.90	1.56	0.600	|	|	O | I	|	2.91
11.500	1.90	1.57	0.603	|	|	O | I	|	2.92
11.583	1.87	1.58	0.605	|	|	O|I	|	2.92
11.667	1.77	1.59	0.606	|	|	OI	|	2.93
11.750	1.74	1.59	0.608	|	|	OI	|	2.93
11.833	1.74	1.60	0.609	|	|	OI	|	2.93
11.917	1.77	1.60	0.610	|	|	OI	|	2.94
12.000	1.79	1.61	0.611	|	|	OI	|	2.94
12.083	1.90	1.62	0.612	|	|	O| I	|	2.95
12.167	2.22	1.63	0.615	|	|	O| I	|	2.96
12.250	2.35	1.65	0.620	|	|	O| I	|	2.97
12.333	2.42	1.68	0.625	|	|	O| I|	|	2.98
12.417	2.50	1.70	0.630	|	|	O I|	|	3.00
12.500	2.54	1.70	0.636	|	|	O I	|	3.02
12.583	2.59	1.70	0.642	|	|	O I	|	3.03
12.667	2.70	1.70	0.648	|	|	O |I	|	3.05
12.750	2.74	1.70	0.655	|	|	O | I	|	3.07
12.833	2.78	1.70	0.663	|	|	O | I	|	3.09
12.917	2.84	1.70	0.670	|	|	O | I	|	3.11
13.000	2.86	1.70	0.678	|	|	O | I	|	3.13
13.083	2.95	1.70	0.686	|	|	O | I	|	3.15
13.167	3.19	1.70	0.696	|	|	O | I	|	3.17
13.250	3.29	1.70	0.706	|	|	O | I|	|	3.20
13.333	3.33	1.70	0.718	|	|	O | I|	|	3.23
13.417	3.35	1.70	0.729	|	|	O | I|	|	3.26
13.500	3.37	1.70	0.740	|	|	O | I	|	3.29
13.583	3.21	1.70	0.751	|	|	O | I	|	3.32
13.667	2.71	1.70	0.760	|	|	O |I	|	3.34
13.750	2.51	1.70	0.766	|	|	O I|	|	3.36
13.833	2.43	1.70	0.771	|	|	O I|	|	3.37
13.917	2.38	1.70	0.776	|	|	O I |	|	3.38
14.000	2.35	1.70	0.781	|	|	O I |	|	3.40
14.083	2.39	1.70	0.785	|	|	O I |	|	3.41
14.167	2.56	1.70	0.791	|	|	O I	|	3.42
14.250	2.62	1.70	0.797	|	|	O I	|	3.44
14.333	2.63	1.70	0.803	|	|	O I	|	3.46
14.417	2.60	1.70	0.810	|	|	O I	|	3.47
14.500	2.59	1.70	0.816	|	|	O I	|	3.49
14.583	2.59	1.70	0.822	|	|	O I	|	3.51
14.667	2.60	1.70	0.828	|	|	O I	|	3.52
14.750	2.60	1.70	0.834	|	|	O I	|	3.54
14.833	2.58	1.70	0.840	|	|	O I	|	3.55
14.917	2.53	1.70	0.846	|	|	O I	|	3.57
15.000	2.51	1.70	0.852	|	|	O I|	|	3.58
15.083	2.49	1.70	0.857	|	|	O I|	|	3.60
15.167	2.44	1.70	0.863	|	|	O I|	|	3.61
15.250	2.42	1.70	0.868	|	|	O I |	|	3.63
15.333	2.39	1.70	0.873	|	|	O I |	|	3.64
15.417	2.34	1.70	0.877	|	|	O I |	|	3.65
15.500	2.32	1.70	0.882	|	|	O I |	|	3.66

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15.583    2.25    1.70      0.886  |        |        O    I  |        |      3.67
15.667    2.06    1.70      0.889  |        |        O  I    |        |      3.68
15.750    1.98    1.70      0.891  |        |        O I     |        |      3.69
15.833    1.95    1.70      0.893  |        |        O I     |        |      3.69
15.917    1.93    1.70      0.894  |        |        O I     |        |      3.70
16.000    1.92    1.70      0.896  |        |        O I     |        |      3.70
16.083    1.68    1.70      0.897  |        |       IO       |        |      3.70
16.167    0.98    1.70      0.894  |        |I      O        |        |      3.69
16.250    0.70    1.70      0.888  |     I  |       O        |        |      3.68
16.333    0.58    1.70      0.881  |    I   |       O        |        |      3.66
16.417    0.52    1.70      0.873  |   I    |       O        |        |      3.64
16.500    0.47    1.70      0.865  |   I    |       O        |        |      3.62
16.583    0.43    1.70      0.856  |   I    |       O        |        |      3.59
16.667    0.36    1.70      0.847  |  I     |       O        |        |      3.57
16.750    0.33    1.70      0.838  |  I     |       O        |        |      3.55
16.833    0.31    1.70      0.828  | I      |       O        |        |      3.52
16.917    0.31    1.70      0.819  | I      |       O        |        |      3.50
17.000    0.30    1.70      0.809  | I      |       O        |        |      3.47
17.083    0.33    1.70      0.799  |  I     |       O        |        |      3.45
17.167    0.42    1.70      0.790  |   I    |       O        |        |      3.42
17.250    0.46    1.70      0.782  |   I    |       O        |        |      3.40
17.333    0.47    1.70      0.773  |   I    |       O        |        |      3.38
17.417    0.48    1.70      0.765  |   I    |       O        |        |      3.35
17.500    0.49    1.70      0.756  |   I    |       O        |        |      3.33
17.583    0.49    1.70      0.748  |   I    |       O        |        |      3.31
17.667    0.50    1.70      0.740  |   I    |       O        |        |      3.29
17.750    0.50    1.70      0.731  |   I    |       O        |        |      3.27
17.833    0.48    1.70      0.723  |   I    |       O        |        |      3.25
17.917    0.44    1.70      0.715  |   I    |       O        |        |      3.22
18.000    0.42    1.70      0.706  |  I     |       O        |        |      3.20
18.083    0.41    1.70      0.697  |  I     |       O        |        |      3.18
18.167    0.41    1.70      0.688  |  I     |       O        |        |      3.15
18.250    0.40    1.70      0.679  |  I     |       O        |        |      3.13
18.333    0.40    1.70      0.670  |  I     |       O        |        |      3.11
18.417    0.40    1.70      0.661  |  I     |       O        |        |      3.08
18.500    0.40    1.70      0.652  |  I     |       O        |        |      3.06
18.583    0.38    1.70      0.643  |  I     |       O        |        |      3.04
18.667    0.34    1.70      0.634  |  I     |       O        |        |      3.01
18.750    0.32    1.68      0.625  |  I     |      O|        |        |      2.98
18.833    0.30    1.63      0.616  | I      |      O|        |        |      2.96
18.917    0.25    1.59      0.606  | I      |      O|        |        |      2.93
19.000    0.22    1.54      0.597  | I      |     O |        |        |      2.90
19.083    0.23    1.50      0.588  | I      |     O |        |        |      2.87
19.167    0.27    1.46      0.580  | I      |    O  |        |        |      2.85
19.250    0.28    1.42      0.572  | I      |    O  |        |        |      2.82
19.333    0.31    1.39      0.564  | I      |    O  |        |        |      2.80
19.417    0.35    1.35      0.557  |  I     |   O   |        |        |      2.78
19.500    0.37    1.32      0.550  |  I     |   O   |        |        |      2.76
19.583    0.37    1.29      0.544  |  I     |   O   |        |        |      2.74
19.667    0.33    1.26      0.537  |  I     |  O    |        |        |      2.72
19.750    0.31    1.23      0.531  | I      |  O    |        |        |      2.70
19.833    0.29    1.20      0.525  | I      |  O    |        |        |      2.68
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19.917	0.24	1.17	0.518	| I | O | | | 2.66
20.000	0.22	1.14	0.512	| I | O | | | 2.64
20.083	0.23	1.11	0.506	| I | O | | | 2.62
20.167	0.27	1.08	0.500	| I | O | | | 2.61
20.250	0.28	1.06	0.495	| I | O | | | 2.59
20.333	0.29	1.03	0.489	| I |O | | | 2.57
20.417	0.29	1.01	0.484	| I |O | | | 2.56
20.500	0.30	0.98	0.480	| I |O | | | 2.54
20.583	0.30	0.96	0.475	| I |O | | | 2.53
20.667	0.30	0.94	0.470	| I O | | | 2.52
20.750	0.30	0.92	0.466	| I O | | | 2.50
20.833	0.28	0.90	0.462	| I O | | | 2.49
20.917	0.24	0.88	0.458	| I O | | | 2.48
21.000	0.22	0.86	0.453	| I O | | | 2.46
21.083	0.23	0.84	0.449	| I O| | | | 2.45
21.167	0.27	0.82	0.445	| I O| | | | 2.44
21.250	0.28	0.80	0.441	| I O| | | | 2.43
21.333	0.27	0.78	0.438	| I O| | | | 2.42
21.417	0.23	0.77	0.434	| I O| | | | 2.41
21.500	0.22	0.75	0.430	| I O| | | | 2.39
21.583	0.22	0.73	0.427	| I O | | | | 2.38
21.667	0.27	0.72	0.423	| I O | | | | 2.37
21.750	0.28	0.70	0.420	| I O | | | | 2.36
21.833	0.27	0.69	0.418	| I O | | | | 2.36
21.917	0.23	0.68	0.415	| I O | | | | 2.35
22.000	0.22	0.66	0.412	| I O | | | | 2.34
22.083	0.22	0.65	0.409	| I O | | | | 2.33
22.167	0.27	0.63	0.406	| I O | | | | 2.32
22.250	0.28	0.62	0.403	| I O | | | | 2.31
22.333	0.27	0.61	0.401	| I O | | | | 2.31
22.417	0.23	0.60	0.399	| I O | | | | 2.30
22.500	0.22	0.59	0.396	| I O | | | | 2.29
22.583	0.21	0.58	0.394	|I O | | | | 2.28
22.667	0.21	0.56	0.391	|I O | | | | 2.28
22.750	0.20	0.55	0.389	|I O | | | | 2.27
22.833	0.20	0.54	0.386	|I O | | | | 2.26
22.917	0.20	0.53	0.384	|I O | | | | 2.25
23.000	0.20	0.52	0.382	|I O | | | | 2.25
23.083	0.20	0.51	0.380	|I O | | | | 2.24
23.167	0.20	0.50	0.377	|I O | | | | 2.23
23.250	0.20	0.49	0.375	|I O | | | | 2.23
23.333	0.20	0.48	0.374	|I O | | | | 2.22
23.417	0.20	0.47	0.372	|I O | | | | 2.22
23.500	0.20	0.46	0.370	|I O | | | | 2.21
23.583	0.20	0.45	0.368	|I O | | | | 2.21
23.667	0.20	0.45	0.366	|I O | | | | 2.20
23.750	0.20	0.44	0.365	|I O | | | | 2.20
23.833	0.20	0.43	0.363	|I O | | | | 2.19
23.917	0.20	0.42	0.361	|I O | | | | 2.19
24.000	0.20	0.42	0.360	|I O | | | | 2.18
24.083	0.17	0.41	0.358	|I O | | | | 2.18
24.167	0.08	0.40	0.356	I O | | | | 2.17

24.250	0.04	0.39	0.354	I O	|	|	|	2.16
24.333	0.02	0.38	0.352	I O	|	|	|	2.16
24.417	0.02	0.36	0.349	I O	|	|	|	2.15
24.500	0.01	0.35	0.347	I O	|	|	|	2.14
24.583	0.01	0.34	0.345	I O	|	|	|	2.14
24.667	0.00	0.33	0.342	I O	|	|	|	2.13
24.750	0.00	0.32	0.340	I O	|	|	|	2.12
24.833	0.00	0.31	0.338	I O	|	|	|	2.11
24.917	0.00	0.30	0.336	I O	|	|	|	2.11
25.000	0.00	0.29	0.334	I O	|	|	|	2.10
25.083	0.00	0.28	0.332	I O	|	|	|	2.10
25.167	0.00	0.27	0.330	I O	|	|	|	2.09
25.250	0.00	0.26	0.328	I O	|	|	|	2.08
25.333	0.00	0.25	0.326	I O	|	|	|	2.08
25.417	0.00	0.25	0.325	I O	|	|	|	2.07
25.500	0.00	0.24	0.323	I O	|	|	|	2.07
25.583	0.00	0.23	0.321	I O	|	|	|	2.06
25.667	0.00	0.22	0.320	I O	|	|	|	2.06
25.750	0.00	0.22	0.318	I O	|	|	|	2.06
25.833	0.00	0.21	0.317	IO	|	|	|	2.05
25.917	0.00	0.20	0.315	IO	|	|	|	2.05
26.000	0.00	0.20	0.314	IO	|	|	|	2.04
26.083	0.00	0.19	0.313	IO	|	|	|	2.04
26.167	0.00	0.18	0.311	IO	|	|	|	2.03
26.250	0.00	0.18	0.310	IO	|	|	|	2.03
26.333	0.00	0.17	0.309	IO	|	|	|	2.03
26.417	0.00	0.17	0.308	IO	|	|	|	2.02
26.500	0.00	0.16	0.307	IO	|	|	|	2.02
26.583	0.00	0.16	0.305	IO	|	|	|	2.02
26.667	0.00	0.15	0.304	IO	|	|	|	2.01
26.750	0.00	0.15	0.303	IO	|	|	|	2.01
26.833	0.00	0.14	0.302	IO	|	|	|	2.01
26.917	0.00	0.14	0.301	IO	|	|	|	2.00
27.000	0.00	0.13	0.300	IO	|	|	|	2.00
27.083	0.00	0.13	0.300	IO	|	|	|	2.00
27.167	0.00	0.13	0.299	IO	|	|	|	1.99
27.250	0.00	0.13	0.298	IO	|	|	|	1.99
27.333	0.00	0.13	0.297	IO	|	|	|	1.99
27.417	0.00	0.13	0.296	IO	|	|	|	1.98
27.500	0.00	0.13	0.295	IO	|	|	|	1.98
27.583	0.00	0.13	0.294	IO	|	|	|	1.97
27.667	0.00	0.13	0.293	IO	|	|	|	1.97
27.750	0.00	0.13	0.292	IO	|	|	|	1.96
27.833	0.00	0.13	0.292	IO	|	|	|	1.96
27.917	0.00	0.13	0.291	IO	|	|	|	1.96
28.000	0.00	0.13	0.290	IO	|	|	|	1.95
28.083	0.00	0.13	0.289	IO	|	|	|	1.95
28.167	0.00	0.13	0.288	IO	|	|	|	1.94
28.250	0.00	0.13	0.287	IO	|	|	|	1.94
28.333	0.00	0.13	0.286	IO	|	|	|	1.93
28.417	0.00	0.13	0.285	IO	|	|	|	1.93
28.500	0.00	0.13	0.285	IO	|	|	|	1.93

28.583	0.00	0.13	0.284	IO				1.92
28.667	0.00	0.13	0.283	IO				1.92
28.750	0.00	0.13	0.282	IO				1.91
28.833	0.00	0.13	0.281	IO				1.91
28.917	0.00	0.13	0.280	IO				1.91
29.000	0.00	0.13	0.279	IO				1.90
29.083	0.00	0.13	0.278	IO				1.90
29.167	0.00	0.13	0.278	IO				1.89
29.250	0.00	0.13	0.277	IO				1.89
29.333	0.00	0.13	0.276	IO				1.89
29.417	0.00	0.13	0.275	IO				1.88
29.500	0.00	0.13	0.274	IO				1.88
29.583	0.00	0.12	0.273	IO				1.87
29.667	0.00	0.12	0.272	IO				1.87
29.750	0.00	0.12	0.272	IO				1.86
29.833	0.00	0.12	0.271	IO				1.86
29.917	0.00	0.12	0.270	IO				1.86
30.000	0.00	0.12	0.269	IO				1.85
30.083	0.00	0.12	0.268	IO				1.85
30.167	0.00	0.12	0.267	IO				1.84
30.250	0.00	0.12	0.266	IO				1.84
30.333	0.00	0.12	0.266	IO				1.84
30.417	0.00	0.12	0.265	IO				1.83
30.500	0.00	0.12	0.264	IO				1.83
30.583	0.00	0.12	0.263	IO				1.82
30.667	0.00	0.12	0.262	IO				1.82
30.750	0.00	0.12	0.261	IO				1.82
30.833	0.00	0.12	0.260	IO				1.81
30.917	0.00	0.12	0.260	IO				1.81
31.000	0.00	0.12	0.259	IO				1.80
31.083	0.00	0.12	0.258	IO				1.80
31.167	0.00	0.12	0.257	IO				1.80
31.250	0.00	0.12	0.256	IO				1.79
31.333	0.00	0.12	0.255	IO				1.79
31.417	0.00	0.12	0.255	IO				1.78
31.500	0.00	0.12	0.254	IO				1.78
31.583	0.00	0.12	0.253	IO				1.78
31.667	0.00	0.12	0.252	IO				1.77
31.750	0.00	0.12	0.251	IO				1.77
31.833	0.00	0.12	0.250	IO				1.76
31.917	0.00	0.12	0.250	IO				1.76
32.000	0.00	0.12	0.249	IO				1.76
32.083	0.00	0.12	0.248	IO				1.75
32.167	0.00	0.12	0.247	IO				1.75
32.250	0.00	0.12	0.246	IO				1.74
32.333	0.00	0.12	0.245	IO				1.74
32.417	0.00	0.12	0.245	IO				1.74
32.500	0.00	0.12	0.244	IO				1.73
32.583	0.00	0.12	0.243	IO				1.73
32.667	0.00	0.12	0.242	IO				1.72
32.750	0.00	0.12	0.241	IO				1.72
32.833	0.00	0.12	0.241	IO				1.72

32.917	0.00	0.12	0.240	IO				1.71
33.000	0.00	0.12	0.239	IO				1.71
33.083	0.00	0.12	0.238	IO				1.71
33.167	0.00	0.12	0.237	IO				1.70
33.250	0.00	0.12	0.236	IO				1.70
33.333	0.00	0.12	0.236	IO				1.69
33.417	0.00	0.12	0.235	IO				1.69
33.500	0.00	0.12	0.234	IO				1.69
33.583	0.00	0.12	0.233	IO				1.68
33.667	0.00	0.12	0.232	IO				1.68
33.750	0.00	0.12	0.232	IO				1.67
33.833	0.00	0.12	0.231	IO				1.67
33.917	0.00	0.12	0.230	IO				1.67
34.000	0.00	0.12	0.229	IO				1.66
34.083	0.00	0.12	0.228	IO				1.66
34.167	0.00	0.12	0.228	IO				1.66
34.250	0.00	0.12	0.227	IO				1.65
34.333	0.00	0.12	0.226	IO				1.65
34.417	0.00	0.12	0.225	IO				1.64
34.500	0.00	0.12	0.224	IO				1.64
34.583	0.00	0.12	0.224	IO				1.64
34.667	0.00	0.12	0.223	IO				1.63
34.750	0.00	0.12	0.222	IO				1.63
34.833	0.00	0.12	0.221	IO				1.63
34.917	0.00	0.11	0.220	IO				1.62
35.000	0.00	0.11	0.220	IO				1.62
35.083	0.00	0.11	0.219	IO				1.61
35.167	0.00	0.11	0.218	IO				1.61
35.250	0.00	0.11	0.217	IO				1.61
35.333	0.00	0.11	0.217	IO				1.60
35.417	0.00	0.11	0.216	IO				1.60
35.500	0.00	0.11	0.215	IO				1.59
35.583	0.00	0.11	0.214	IO				1.59
35.667	0.00	0.11	0.213	IO				1.59
35.750	0.00	0.11	0.213	IO				1.58
35.833	0.00	0.11	0.212	IO				1.58
35.917	0.00	0.11	0.211	IO				1.58
36.000	0.00	0.11	0.210	IO				1.57
36.083	0.00	0.11	0.209	IO				1.57
36.167	0.00	0.11	0.209	IO				1.57
36.250	0.00	0.11	0.208	IO				1.56
36.333	0.00	0.11	0.207	IO				1.56
36.417	0.00	0.11	0.206	IO				1.55
36.500	0.00	0.11	0.206	IO				1.55
36.583	0.00	0.11	0.205	IO				1.55
36.667	0.00	0.11	0.204	IO				1.54
36.750	0.00	0.11	0.203	IO				1.54
36.833	0.00	0.11	0.203	IO				1.54
36.917	0.00	0.11	0.202	IO				1.53
37.000	0.00	0.11	0.201	IO				1.53
37.083	0.00	0.11	0.200	IO				1.52
37.167	0.00	0.11	0.199	IO				1.52

37.250	0.00	0.11	0.199	IO				1.52
37.333	0.00	0.11	0.198	IO				1.51
37.417	0.00	0.11	0.197	IO				1.51
37.500	0.00	0.11	0.196	IO				1.51
37.583	0.00	0.11	0.196	IO				1.50
37.667	0.00	0.11	0.195	IO				1.50
37.750	0.00	0.11	0.194	IO				1.50
37.833	0.00	0.11	0.193	IO				1.49
37.917	0.00	0.11	0.193	IO				1.49
38.000	0.00	0.11	0.192	IO				1.49
38.083	0.00	0.11	0.191	IO				1.48
38.167	0.00	0.11	0.190	IO				1.48
38.250	0.00	0.11	0.190	IO				1.47
38.333	0.00	0.11	0.189	IO				1.47
38.417	0.00	0.11	0.188	IO				1.47
38.500	0.00	0.11	0.187	IO				1.46
38.583	0.00	0.11	0.187	IO				1.46
38.667	0.00	0.11	0.186	IO				1.46
38.750	0.00	0.11	0.185	IO				1.45
38.833	0.00	0.11	0.184	IO				1.45
38.917	0.00	0.11	0.184	IO				1.45
39.000	0.00	0.11	0.183	IO				1.44
39.083	0.00	0.11	0.182	IO				1.44
39.167	0.00	0.11	0.181	IO				1.44
39.250	0.00	0.11	0.181	IO				1.43
39.333	0.00	0.11	0.180	IO				1.43
39.417	0.00	0.11	0.179	IO				1.42
39.500	0.00	0.11	0.178	IO				1.42
39.583	0.00	0.11	0.178	IO				1.42
39.667	0.00	0.11	0.177	IO				1.41
39.750	0.00	0.11	0.176	IO				1.41
39.833	0.00	0.11	0.176	IO				1.41
39.917	0.00	0.11	0.175	IO				1.40
40.000	0.00	0.11	0.174	IO				1.40
40.083	0.00	0.11	0.173	IO				1.40
40.167	0.00	0.11	0.173	IO				1.39
40.250	0.00	0.11	0.172	IO				1.39
40.333	0.00	0.11	0.171	IO				1.39
40.417	0.00	0.11	0.170	IO				1.38
40.500	0.00	0.11	0.170	O				1.38
40.583	0.00	0.11	0.169	O				1.38
40.667	0.00	0.10	0.168	O				1.37
40.750	0.00	0.10	0.168	O				1.37
40.833	0.00	0.10	0.167	O				1.37
40.917	0.00	0.10	0.166	O				1.36
41.000	0.00	0.10	0.165	O				1.36
41.083	0.00	0.10	0.165	O				1.36
41.167	0.00	0.10	0.164	O				1.35
41.250	0.00	0.10	0.163	O				1.35
41.333	0.00	0.10	0.163	O				1.35
41.417	0.00	0.10	0.162	O				1.34
41.500	0.00	0.10	0.161	O				1.34

41.583	0.00	0.10	0.160	O	|	|	|	|	1.34
41.667	0.00	0.10	0.160	O	|	|	|	|	1.33
41.750	0.00	0.10	0.159	O	|	|	|	|	1.33
41.833	0.00	0.10	0.158	O	|	|	|	|	1.33
41.917	0.00	0.10	0.158	O	|	|	|	|	1.32
42.000	0.00	0.10	0.157	O	|	|	|	|	1.32
42.083	0.00	0.10	0.156	O	|	|	|	|	1.31
42.167	0.00	0.10	0.155	O	|	|	|	|	1.31
42.250	0.00	0.10	0.155	O	|	|	|	|	1.31
42.333	0.00	0.10	0.154	O	|	|	|	|	1.30
42.417	0.00	0.10	0.153	O	|	|	|	|	1.30
42.500	0.00	0.10	0.153	O	|	|	|	|	1.30
42.583	0.00	0.10	0.152	O	|	|	|	|	1.29
42.667	0.00	0.10	0.151	O	|	|	|	|	1.29
42.750	0.00	0.10	0.151	O	|	|	|	|	1.29
42.833	0.00	0.10	0.150	O	|	|	|	|	1.28
42.917	0.00	0.10	0.149	O	|	|	|	|	1.28
43.000	0.00	0.10	0.148	O	|	|	|	|	1.28
43.083	0.00	0.10	0.148	O	|	|	|	|	1.27
43.167	0.00	0.10	0.147	O	|	|	|	|	1.27
43.250	0.00	0.10	0.146	O	|	|	|	|	1.27
43.333	0.00	0.10	0.146	O	|	|	|	|	1.26
43.417	0.00	0.10	0.145	O	|	|	|	|	1.26
43.500	0.00	0.10	0.144	O	|	|	|	|	1.26
43.583	0.00	0.10	0.144	O	|	|	|	|	1.26
43.667	0.00	0.10	0.143	O	|	|	|	|	1.25
43.750	0.00	0.10	0.142	O	|	|	|	|	1.25
43.833	0.00	0.10	0.141	O	|	|	|	|	1.25
43.917	0.00	0.10	0.141	O	|	|	|	|	1.24
44.000	0.00	0.10	0.140	O	|	|	|	|	1.24
44.083	0.00	0.10	0.139	O	|	|	|	|	1.24
44.167	0.00	0.10	0.139	O	|	|	|	|	1.23
44.250	0.00	0.10	0.138	O	|	|	|	|	1.23
44.333	0.00	0.10	0.137	O	|	|	|	|	1.23
44.417	0.00	0.10	0.137	O	|	|	|	|	1.22
44.500	0.00	0.10	0.136	O	|	|	|	|	1.22
44.583	0.00	0.10	0.135	O	|	|	|	|	1.22
44.667	0.00	0.10	0.135	O	|	|	|	|	1.21
44.750	0.00	0.10	0.134	O	|	|	|	|	1.21
44.833	0.00	0.10	0.133	O	|	|	|	|	1.21
44.917	0.00	0.10	0.133	O	|	|	|	|	1.20
45.000	0.00	0.10	0.132	O	|	|	|	|	1.20
45.083	0.00	0.10	0.131	O	|	|	|	|	1.20
45.167	0.00	0.10	0.131	O	|	|	|	|	1.19
45.250	0.00	0.10	0.130	O	|	|	|	|	1.19
45.333	0.00	0.10	0.129	O	|	|	|	|	1.19
45.417	0.00	0.10	0.129	O	|	|	|	|	1.18
45.500	0.00	0.10	0.128	O	|	|	|	|	1.18
45.583	0.00	0.10	0.127	O	|	|	|	|	1.18
45.667	0.00	0.10	0.127	O	|	|	|	|	1.17
45.750	0.00	0.10	0.126	O	|	|	|	|	1.17
45.833	0.00	0.10	0.125	O	|	|	|	|	1.17

45.917	0.00	0.10	0.125	O	|	|	|	|	1.16
46.000	0.00	0.10	0.124	O	|	|	|	|	1.16
46.083	0.00	0.10	0.123	O	|	|	|	|	1.16
46.167	0.00	0.10	0.123	O	|	|	|	|	1.16
46.250	0.00	0.10	0.122	O	|	|	|	|	1.15
46.333	0.00	0.10	0.121	O	|	|	|	|	1.15
46.417	0.00	0.10	0.121	O	|	|	|	|	1.15
46.500	0.00	0.10	0.120	O	|	|	|	|	1.14
46.583	0.00	0.10	0.119	O	|	|	|	|	1.14
46.667	0.00	0.10	0.119	O	|	|	|	|	1.14
46.750	0.00	0.10	0.118	O	|	|	|	|	1.13
46.833	0.00	0.10	0.117	O	|	|	|	|	1.13
46.917	0.00	0.10	0.117	O	|	|	|	|	1.13
47.000	0.00	0.09	0.116	O	|	|	|	|	1.12
47.083	0.00	0.09	0.115	O	|	|	|	|	1.12
47.167	0.00	0.09	0.115	O	|	|	|	|	1.12
47.250	0.00	0.09	0.114	O	|	|	|	|	1.11
47.333	0.00	0.09	0.113	O	|	|	|	|	1.11
47.417	0.00	0.09	0.113	O	|	|	|	|	1.11
47.500	0.00	0.09	0.112	O	|	|	|	|	1.11
47.583	0.00	0.09	0.111	O	|	|	|	|	1.10
47.667	0.00	0.09	0.111	O	|	|	|	|	1.10
47.750	0.00	0.09	0.110	O	|	|	|	|	1.10
47.833	0.00	0.09	0.110	O	|	|	|	|	1.09
47.917	0.00	0.09	0.109	O	|	|	|	|	1.09
48.000	0.00	0.09	0.108	O	|	|	|	|	1.09
48.083	0.00	0.09	0.108	O	|	|	|	|	1.08
48.167	0.00	0.09	0.107	O	|	|	|	|	1.08
48.250	0.00	0.09	0.106	O	|	|	|	|	1.08
48.333	0.00	0.09	0.106	O	|	|	|	|	1.07
48.417	0.00	0.09	0.105	O	|	|	|	|	1.07
48.500	0.00	0.09	0.104	O	|	|	|	|	1.07
48.583	0.00	0.09	0.104	O	|	|	|	|	1.07
48.667	0.00	0.09	0.103	O	|	|	|	|	1.06
48.750	0.00	0.09	0.102	O	|	|	|	|	1.06
48.833	0.00	0.09	0.102	O	|	|	|	|	1.06
48.917	0.00	0.09	0.101	O	|	|	|	|	1.05
49.000	0.00	0.09	0.101	O	|	|	|	|	1.05
49.083	0.00	0.09	0.100	O	|	|	|	|	1.05
49.167	0.00	0.09	0.099	O	|	|	|	|	1.04
49.250	0.00	0.09	0.099	O	|	|	|	|	1.04
49.333	0.00	0.09	0.098	O	|	|	|	|	1.04
49.417	0.00	0.09	0.097	O	|	|	|	|	1.04
49.500	0.00	0.09	0.097	O	|	|	|	|	1.03
49.583	0.00	0.09	0.096	O	|	|	|	|	1.03
49.667	0.00	0.09	0.096	O	|	|	|	|	1.03
49.750	0.00	0.09	0.095	O	|	|	|	|	1.02
49.833	0.00	0.09	0.094	O	|	|	|	|	1.02
49.917	0.00	0.09	0.094	O	|	|	|	|	1.02
50.000	0.00	0.09	0.093	O	|	|	|	|	1.01
50.083	0.00	0.09	0.092	O	|	|	|	|	1.01
50.167	0.00	0.09	0.092	O	|	|	|	|	1.01

50.250	0.00	0.09	0.091	O	|	|	|	1.01
50.333	0.00	0.09	0.091	O	|	|	|	1.00
50.417	0.00	0.09	0.090	O	|	|	|	1.00
50.500	0.00	0.09	0.089	O	|	|	|	0.99
50.583	0.00	0.09	0.089	O	|	|	|	0.99
50.667	0.00	0.09	0.088	O	|	|	|	0.98
50.750	0.00	0.09	0.087	O	|	|	|	0.97
50.833	0.00	0.09	0.087	O	|	|	|	0.97
50.917	0.00	0.09	0.086	O	|	|	|	0.96
51.000	0.00	0.09	0.086	O	|	|	|	0.95
51.083	0.00	0.09	0.085	O	|	|	|	0.95
51.167	0.00	0.08	0.085	O	|	|	|	0.94
51.250	0.00	0.08	0.084	O	|	|	|	0.93
51.333	0.00	0.08	0.083	O	|	|	|	0.93
51.417	0.00	0.08	0.083	O	|	|	|	0.92
51.500	0.00	0.08	0.082	O	|	|	|	0.91
51.583	0.00	0.08	0.082	O	|	|	|	0.91
51.667	0.00	0.08	0.081	O	|	|	|	0.90
51.750	0.00	0.08	0.081	O	|	|	|	0.89
51.833	0.00	0.08	0.080	O	|	|	|	0.89
51.917	0.00	0.08	0.079	O	|	|	|	0.88
52.000	0.00	0.08	0.079	O	|	|	|	0.88
52.083	0.00	0.08	0.078	O	|	|	|	0.87
52.167	0.00	0.08	0.078	O	|	|	|	0.86
52.250	0.00	0.08	0.077	O	|	|	|	0.86
52.333	0.00	0.08	0.077	O	|	|	|	0.85
52.417	0.00	0.08	0.076	O	|	|	|	0.85
52.500	0.00	0.08	0.076	O	|	|	|	0.84
52.583	0.00	0.08	0.075	O	|	|	|	0.84
52.667	0.00	0.07	0.075	O	|	|	|	0.83
52.750	0.00	0.07	0.074	O	|	|	|	0.82
52.833	0.00	0.07	0.074	O	|	|	|	0.82
52.917	0.00	0.07	0.073	O	|	|	|	0.81
53.000	0.00	0.07	0.073	O	|	|	|	0.81
53.083	0.00	0.07	0.072	O	|	|	|	0.80
53.167	0.00	0.07	0.072	O	|	|	|	0.80
53.250	0.00	0.07	0.071	O	|	|	|	0.79
53.333	0.00	0.07	0.071	O	|	|	|	0.79
53.417	0.00	0.07	0.070	O	|	|	|	0.78
53.500	0.00	0.07	0.070	O	|	|	|	0.77
53.583	0.00	0.07	0.069	O	|	|	|	0.77
53.667	0.00	0.07	0.069	O	|	|	|	0.76
53.750	0.00	0.07	0.068	O	|	|	|	0.76
53.833	0.00	0.07	0.068	O	|	|	|	0.75
53.917	0.00	0.07	0.067	O	|	|	|	0.75
54.000	0.00	0.07	0.067	O	|	|	|	0.74
54.083	0.00	0.07	0.066	O	|	|	|	0.74
54.167	0.00	0.07	0.066	O	|	|	|	0.73
54.250	0.00	0.07	0.065	O	|	|	|	0.73
54.333	0.00	0.07	0.065	O	|	|	|	0.72
54.417	0.00	0.06	0.065	O	|	|	|	0.72
54.500	0.00	0.06	0.064	O	|	|	|	0.71

54.583	0.00	0.06	0.064	O	|	|	|	0.71
54.667	0.00	0.06	0.063	O	|	|	|	0.70
54.750	0.00	0.06	0.063	O	|	|	|	0.70
54.833	0.00	0.06	0.062	O	|	|	|	0.69
54.917	0.00	0.06	0.062	O	|	|	|	0.69
55.000	0.00	0.06	0.062	O	|	|	|	0.68
55.083	0.00	0.06	0.061	O	|	|	|	0.68
55.167	0.00	0.06	0.061	O	|	|	|	0.67
55.250	0.00	0.06	0.060	O	|	|	|	0.67
55.333	0.00	0.06	0.060	O	|	|	|	0.67
55.417	0.00	0.06	0.059	O	|	|	|	0.66
55.500	0.00	0.06	0.059	O	|	|	|	0.66
55.583	0.00	0.06	0.059	O	|	|	|	0.65
55.667	0.00	0.06	0.058	O	|	|	|	0.65
55.750	0.00	0.06	0.058	O	|	|	|	0.64
55.833	0.00	0.06	0.057	O	|	|	|	0.64
55.917	0.00	0.06	0.057	O	|	|	|	0.63
56.000	0.00	0.06	0.057	O	|	|	|	0.63
56.083	0.00	0.06	0.056	O	|	|	|	0.63
56.167	0.00	0.06	0.056	O	|	|	|	0.62
56.250	0.00	0.06	0.056	O	|	|	|	0.62
56.333	0.00	0.06	0.055	O	|	|	|	0.61
56.417	0.00	0.05	0.055	O	|	|	|	0.61
56.500	0.00	0.05	0.054	O	|	|	|	0.60
56.583	0.00	0.05	0.054	O	|	|	|	0.60
56.667	0.00	0.05	0.054	O	|	|	|	0.60
56.750	0.00	0.05	0.053	O	|	|	|	0.59
56.833	0.00	0.05	0.053	O	|	|	|	0.59
56.917	0.00	0.05	0.053	O	|	|	|	0.58
57.000	0.00	0.05	0.052	O	|	|	|	0.58
57.083	0.00	0.05	0.052	O	|	|	|	0.58
57.167	0.00	0.05	0.051	O	|	|	|	0.57
57.250	0.00	0.05	0.051	O	|	|	|	0.57
57.333	0.00	0.05	0.051	O	|	|	|	0.56
57.417	0.00	0.05	0.050	O	|	|	|	0.56
57.500	0.00	0.05	0.050	O	|	|	|	0.56
57.583	0.00	0.05	0.050	O	|	|	|	0.55
57.667	0.00	0.05	0.049	O	|	|	|	0.55
57.750	0.00	0.05	0.049	O	|	|	|	0.54
57.833	0.00	0.05	0.049	O	|	|	|	0.54
57.917	0.00	0.05	0.048	O	|	|	|	0.54
58.000	0.00	0.05	0.048	O	|	|	|	0.53
58.083	0.00	0.05	0.048	O	|	|	|	0.53
58.167	0.00	0.05	0.047	O	|	|	|	0.53
58.250	0.00	0.05	0.047	O	|	|	|	0.52
58.333	0.00	0.05	0.047	O	|	|	|	0.52
58.417	0.00	0.05	0.046	O	|	|	|	0.52
58.500	0.00	0.05	0.046	O	|	|	|	0.51
58.583	0.00	0.05	0.046	O	|	|	|	0.51
58.667	0.00	0.05	0.045	O	|	|	|	0.51
58.750	0.00	0.05	0.045	O	|	|	|	0.50
58.833	0.00	0.04	0.045	O	|	|	|	0.50

58.917	0.00	0.04	0.045	O	|	|	|	0.49
59.000	0.00	0.04	0.044	O	|	|	|	0.49
59.083	0.00	0.04	0.044	O	|	|	|	0.49
59.167	0.00	0.04	0.044	O	|	|	|	0.48
59.250	0.00	0.04	0.043	O	|	|	|	0.48
59.333	0.00	0.04	0.043	O	|	|	|	0.48
59.417	0.00	0.04	0.043	O	|	|	|	0.47
59.500	0.00	0.04	0.042	O	|	|	|	0.47
59.583	0.00	0.04	0.042	O	|	|	|	0.47
59.667	0.00	0.04	0.042	O	|	|	|	0.47
59.750	0.00	0.04	0.042	O	|	|	|	0.46
59.833	0.00	0.04	0.041	O	|	|	|	0.46
59.917	0.00	0.04	0.041	O	|	|	|	0.46
60.000	0.00	0.04	0.041	O	|	|	|	0.45
60.083	0.00	0.04	0.040	O	|	|	|	0.45
60.167	0.00	0.04	0.040	O	|	|	|	0.45
60.250	0.00	0.04	0.040	O	|	|	|	0.44
60.333	0.00	0.04	0.040	O	|	|	|	0.44
60.417	0.00	0.04	0.039	O	|	|	|	0.44
60.500	0.00	0.04	0.039	O	|	|	|	0.43
60.583	0.00	0.04	0.039	O	|	|	|	0.43
60.667	0.00	0.04	0.039	O	|	|	|	0.43
60.750	0.00	0.04	0.038	O	|	|	|	0.43
60.833	0.00	0.04	0.038	O	|	|	|	0.42
60.917	0.00	0.04	0.038	O	|	|	|	0.42
61.000	0.00	0.04	0.037	O	|	|	|	0.42
61.083	0.00	0.04	0.037	O	|	|	|	0.41
61.167	0.00	0.04	0.037	O	|	|	|	0.41
61.250	0.00	0.04	0.037	O	|	|	|	0.41
61.333	0.00	0.04	0.036	O	|	|	|	0.41
61.417	0.00	0.04	0.036	O	|	|	|	0.40
61.500	0.00	0.04	0.036	O	|	|	|	0.40
61.583	0.00	0.04	0.036	O	|	|	|	0.40
61.667	0.00	0.04	0.035	O	|	|	|	0.39
61.750	0.00	0.04	0.035	O	|	|	|	0.39
61.833	0.00	0.03	0.035	O	|	|	|	0.39
61.917	0.00	0.03	0.035	O	|	|	|	0.39
62.000	0.00	0.03	0.035	O	|	|	|	0.38
62.083	0.00	0.03	0.034	O	|	|	|	0.38
62.167	0.00	0.03	0.034	O	|	|	|	0.38
62.250	0.00	0.03	0.034	O	|	|	|	0.38
62.333	0.00	0.03	0.034	O	|	|	|	0.37
62.417	0.00	0.03	0.033	O	|	|	|	0.37
62.500	0.00	0.03	0.033	O	|	|	|	0.37
62.583	0.00	0.03	0.033	O	|	|	|	0.37
62.667	0.00	0.03	0.033	O	|	|	|	0.36
62.750	0.00	0.03	0.032	O	|	|	|	0.36
62.833	0.00	0.03	0.032	O	|	|	|	0.36
62.917	0.00	0.03	0.032	O	|	|	|	0.36
63.000	0.00	0.03	0.032	O	|	|	|	0.35
63.083	0.00	0.03	0.032	O	|	|	|	0.35
63.167	0.00	0.03	0.031	O	|	|	|	0.35

63.250	0.00	0.03	0.031	O	|	|	|	0.35
63.333	0.00	0.03	0.031	O	|	|	|	0.34
63.417	0.00	0.03	0.031	O	|	|	|	0.34
63.500	0.00	0.03	0.030	O	|	|	|	0.34
63.583	0.00	0.03	0.030	O	|	|	|	0.34
63.667	0.00	0.03	0.030	O	|	|	|	0.33
63.750	0.00	0.03	0.030	O	|	|	|	0.33
63.833	0.00	0.03	0.030	O	|	|	|	0.33
63.917	0.00	0.03	0.029	O	|	|	|	0.33
64.000	0.00	0.03	0.029	O	|	|	|	0.33
64.083	0.00	0.03	0.029	O	|	|	|	0.32
64.167	0.00	0.03	0.029	O	|	|	|	0.32
64.250	0.00	0.03	0.029	O	|	|	|	0.32
64.333	0.00	0.03	0.028	O	|	|	|	0.32
64.417	0.00	0.03	0.028	O	|	|	|	0.31
64.500	0.00	0.03	0.028	O	|	|	|	0.31
64.583	0.00	0.03	0.028	O	|	|	|	0.31
64.667	0.00	0.03	0.028	O	|	|	|	0.31
64.750	0.00	0.03	0.028	O	|	|	|	0.31
64.833	0.00	0.03	0.027	O	|	|	|	0.30
64.917	0.00	0.03	0.027	O	|	|	|	0.30
65.000	0.00	0.03	0.027	O	|	|	|	0.30
65.083	0.00	0.03	0.027	O	|	|	|	0.30
65.167	0.00	0.03	0.027	O	|	|	|	0.30
65.250	0.00	0.03	0.026	O	|	|	|	0.29
65.333	0.00	0.03	0.026	O	|	|	|	0.29
65.417	0.00	0.03	0.026	O	|	|	|	0.29
65.500	0.00	0.03	0.026	O	|	|	|	0.29
65.583	0.00	0.03	0.026	O	|	|	|	0.29
65.667	0.00	0.03	0.025	O	|	|	|	0.28
65.750	0.00	0.03	0.025	O	|	|	|	0.28
65.833	0.00	0.03	0.025	O	|	|	|	0.28
65.917	0.00	0.02	0.025	O	|	|	|	0.28
66.000	0.00	0.02	0.025	O	|	|	|	0.28
66.083	0.00	0.02	0.025	O	|	|	|	0.27
66.167	0.00	0.02	0.024	O	|	|	|	0.27
66.250	0.00	0.02	0.024	O	|	|	|	0.27
66.333	0.00	0.02	0.024	O	|	|	|	0.27
66.417	0.00	0.02	0.024	O	|	|	|	0.27
66.500	0.00	0.02	0.024	O	|	|	|	0.26
66.583	0.00	0.02	0.024	O	|	|	|	0.26
66.667	0.00	0.02	0.023	O	|	|	|	0.26
66.750	0.00	0.02	0.023	O	|	|	|	0.26
66.833	0.00	0.02	0.023	O	|	|	|	0.26
66.917	0.00	0.02	0.023	O	|	|	|	0.26
67.000	0.00	0.02	0.023	O	|	|	|	0.25
67.083	0.00	0.02	0.023	O	|	|	|	0.25
67.167	0.00	0.02	0.023	O	|	|	|	0.25
67.250	0.00	0.02	0.022	O	|	|	|	0.25
67.333	0.00	0.02	0.022	O	|	|	|	0.25
67.417	0.00	0.02	0.022	O	|	|	|	0.25
67.500	0.00	0.02	0.022	O	|	|	|	0.24

67.583	0.00	0.02	0.022	O	|	|	|	0.24
67.667	0.00	0.02	0.022	O	|	|	|	0.24
67.750	0.00	0.02	0.021	O	|	|	|	0.24
67.833	0.00	0.02	0.021	O	|	|	|	0.24
67.917	0.00	0.02	0.021	O	|	|	|	0.24
68.000	0.00	0.02	0.021	O	|	|	|	0.23
68.083	0.00	0.02	0.021	O	|	|	|	0.23
68.167	0.00	0.02	0.021	O	|	|	|	0.23
68.250	0.00	0.02	0.021	O	|	|	|	0.23
68.333	0.00	0.02	0.020	O	|	|	|	0.23
68.417	0.00	0.02	0.020	O	|	|	|	0.23
68.500	0.00	0.02	0.020	O	|	|	|	0.22
68.583	0.00	0.02	0.020	O	|	|	|	0.22
68.667	0.00	0.02	0.020	O	|	|	|	0.22
68.750	0.00	0.02	0.020	O	|	|	|	0.22
68.833	0.00	0.02	0.020	O	|	|	|	0.22
68.917	0.00	0.02	0.019	O	|	|	|	0.22
69.000	0.00	0.02	0.019	O	|	|	|	0.22
69.083	0.00	0.02	0.019	O	|	|	|	0.21
69.167	0.00	0.02	0.019	O	|	|	|	0.21
69.250	0.00	0.02	0.019	O	|	|	|	0.21
69.333	0.00	0.02	0.019	O	|	|	|	0.21
69.417	0.00	0.02	0.019	O	|	|	|	0.21
69.500	0.00	0.02	0.019	O	|	|	|	0.21
69.583	0.00	0.02	0.018	O	|	|	|	0.20
69.667	0.00	0.02	0.018	O	|	|	|	0.20
69.750	0.00	0.02	0.018	O	|	|	|	0.20
69.833	0.00	0.02	0.018	O	|	|	|	0.20
69.917	0.00	0.02	0.018	O	|	|	|	0.20
70.000	0.00	0.02	0.018	O	|	|	|	0.20
70.083	0.00	0.02	0.018	O	|	|	|	0.20
70.167	0.00	0.02	0.018	O	|	|	|	0.20
70.250	0.00	0.02	0.017	O	|	|	|	0.19
70.333	0.00	0.02	0.017	O	|	|	|	0.19
70.417	0.00	0.02	0.017	O	|	|	|	0.19
70.500	0.00	0.02	0.017	O	|	|	|	0.19
70.583	0.00	0.02	0.017	O	|	|	|	0.19
70.667	0.00	0.02	0.017	O	|	|	|	0.19
70.750	0.00	0.02	0.017	O	|	|	|	0.19
70.833	0.00	0.02	0.017	O	|	|	|	0.18
70.917	0.00	0.02	0.017	O	|	|	|	0.18
71.000	0.00	0.02	0.016	O	|	|	|	0.18
71.083	0.00	0.02	0.016	O	|	|	|	0.18
71.167	0.00	0.02	0.016	O	|	|	|	0.18
71.250	0.00	0.02	0.016	O	|	|	|	0.18
71.333	0.00	0.02	0.016	O	|	|	|	0.18
71.417	0.00	0.02	0.016	O	|	|	|	0.18
71.500	0.00	0.02	0.016	O	|	|	|	0.17
71.583	0.00	0.02	0.016	O	|	|	|	0.17
71.667	0.00	0.02	0.016	O	|	|	|	0.17
71.750	0.00	0.02	0.015	O	|	|	|	0.17
71.833	0.00	0.02	0.015	O	|	|	|	0.17

71.917	0.00	0.02	0.015	O	|	|	|	0.17
72.000	0.00	0.02	0.015	O	|	|	|	0.17
72.083	0.00	0.02	0.015	O	|	|	|	0.17
72.167	0.00	0.01	0.015	O	|	|	|	0.17
72.250	0.00	0.01	0.015	O	|	|	|	0.16
72.333	0.00	0.01	0.015	O	|	|	|	0.16
72.417	0.00	0.01	0.015	O	|	|	|	0.16
72.500	0.00	0.01	0.014	O	|	|	|	0.16
72.583	0.00	0.01	0.014	O	|	|	|	0.16
72.667	0.00	0.01	0.014	O	|	|	|	0.16
72.750	0.00	0.01	0.014	O	|	|	|	0.16
72.833	0.00	0.01	0.014	O	|	|	|	0.16
72.917	0.00	0.01	0.014	O	|	|	|	0.16
73.000	0.00	0.01	0.014	O	|	|	|	0.15
73.083	0.00	0.01	0.014	O	|	|	|	0.15
73.167	0.00	0.01	0.014	O	|	|	|	0.15
73.250	0.00	0.01	0.014	O	|	|	|	0.15
73.333	0.00	0.01	0.014	O	|	|	|	0.15
73.417	0.00	0.01	0.013	O	|	|	|	0.15
73.500	0.00	0.01	0.013	O	|	|	|	0.15
73.583	0.00	0.01	0.013	O	|	|	|	0.15
73.667	0.00	0.01	0.013	O	|	|	|	0.15
73.750	0.00	0.01	0.013	O	|	|	|	0.15
73.833	0.00	0.01	0.013	O	|	|	|	0.14
73.917	0.00	0.01	0.013	O	|	|	|	0.14
74.000	0.00	0.01	0.013	O	|	|	|	0.14
74.083	0.00	0.01	0.013	O	|	|	|	0.14
74.167	0.00	0.01	0.013	O	|	|	|	0.14
74.250	0.00	0.01	0.013	O	|	|	|	0.14
74.333	0.00	0.01	0.012	O	|	|	|	0.14
74.417	0.00	0.01	0.012	O	|	|	|	0.14
74.500	0.00	0.01	0.012	O	|	|	|	0.14
74.583	0.00	0.01	0.012	O	|	|	|	0.14
74.667	0.00	0.01	0.012	O	|	|	|	0.13
74.750	0.00	0.01	0.012	O	|	|	|	0.13
74.833	0.00	0.01	0.012	O	|	|	|	0.13
74.917	0.00	0.01	0.012	O	|	|	|	0.13
75.000	0.00	0.01	0.012	O	|	|	|	0.13
75.083	0.00	0.01	0.012	O	|	|	|	0.13
75.167	0.00	0.01	0.012	O	|	|	|	0.13
75.250	0.00	0.01	0.012	O	|	|	|	0.13
75.333	0.00	0.01	0.011	O	|	|	|	0.13
75.417	0.00	0.01	0.011	O	|	|	|	0.13
75.500	0.00	0.01	0.011	O	|	|	|	0.13
75.583	0.00	0.01	0.011	O	|	|	|	0.12
75.667	0.00	0.01	0.011	O	|	|	|	0.12
75.750	0.00	0.01	0.011	O	|	|	|	0.12
75.833	0.00	0.01	0.011	O	|	|	|	0.12
75.917	0.00	0.01	0.011	O	|	|	|	0.12
76.000	0.00	0.01	0.011	O	|	|	|	0.12
76.083	0.00	0.01	0.011	O	|	|	|	0.12
76.167	0.00	0.01	0.011	O	|	|	|	0.12

76.250	0.00	0.01	0.011	O	|	|	|	0.12
76.333	0.00	0.01	0.011	O	|	|	|	0.12
76.417	0.00	0.01	0.010	O	|	|	|	0.12
76.500	0.00	0.01	0.010	O	|	|	|	0.12
76.583	0.00	0.01	0.010	O	|	|	|	0.11
76.667	0.00	0.01	0.010	O	|	|	|	0.11
76.750	0.00	0.01	0.010	O	|	|	|	0.11
76.833	0.00	0.01	0.010	O	|	|	|	0.11
76.917	0.00	0.01	0.010	O	|	|	|	0.11
77.000	0.00	0.01	0.010	O	|	|	|	0.11
77.083	0.00	0.01	0.010	O	|	|	|	0.11
77.167	0.00	0.01	0.010	O	|	|	|	0.11
77.250	0.00	0.01	0.010	O	|	|	|	0.11
77.333	0.00	0.01	0.010	O	|	|	|	0.11
77.417	0.00	0.01	0.010	O	|	|	|	0.11
77.500	0.00	0.01	0.010	O	|	|	|	0.11
77.583	0.00	0.01	0.010	O	|	|	|	0.11
77.667	0.00	0.01	0.009	O	|	|	|	0.11
77.750	0.00	0.01	0.009	O	|	|	|	0.10
77.833	0.00	0.01	0.009	O	|	|	|	0.10
77.917	0.00	0.01	0.009	O	|	|	|	0.10
78.000	0.00	0.01	0.009	O	|	|	|	0.10
78.083	0.00	0.01	0.009	O	|	|	|	0.10
78.167	0.00	0.01	0.009	O	|	|	|	0.10
78.250	0.00	0.01	0.009	O	|	|	|	0.10
78.333	0.00	0.01	0.009	O	|	|	|	0.10
78.417	0.00	0.01	0.009	O	|	|	|	0.10
78.500	0.00	0.01	0.009	O	|	|	|	0.10
78.583	0.00	0.01	0.009	O	|	|	|	0.10
78.667	0.00	0.01	0.009	O	|	|	|	0.10
78.750	0.00	0.01	0.009	O	|	|	|	0.10
78.833	0.00	0.01	0.009	O	|	|	|	0.10
78.917	0.00	0.01	0.009	O	|	|	|	0.09
79.000	0.00	0.01	0.008	O	|	|	|	0.09
79.083	0.00	0.01	0.008	O	|	|	|	0.09
79.167	0.00	0.01	0.008	O	|	|	|	0.09
79.250	0.00	0.01	0.008	O	|	|	|	0.09
79.333	0.00	0.01	0.008	O	|	|	|	0.09
79.417	0.00	0.01	0.008	O	|	|	|	0.09
79.500	0.00	0.01	0.008	O	|	|	|	0.09
79.583	0.00	0.01	0.008	O	|	|	|	0.09
79.667	0.00	0.01	0.008	O	|	|	|	0.09
79.750	0.00	0.01	0.008	O	|	|	|	0.09
79.833	0.00	0.01	0.008	O	|	|	|	0.09
79.917	0.00	0.01	0.008	O	|	|	|	0.09
80.000	0.00	0.01	0.008	O	|	|	|	0.09
80.083	0.00	0.01	0.008	O	|	|	|	0.09
80.167	0.00	0.01	0.008	O	|	|	|	0.09
80.250	0.00	0.01	0.008	O	|	|	|	0.08
80.333	0.00	0.01	0.008	O	|	|	|	0.08
80.417	0.00	0.01	0.008	O	|	|	|	0.08
80.500	0.00	0.01	0.007	O	|	|	|	0.08

80.583	0.00	0.01	0.007	O	|	|	|	0.08
80.667	0.00	0.01	0.007	O	|	|	|	0.08
80.750	0.00	0.01	0.007	O	|	|	|	0.08
80.833	0.00	0.01	0.007	O	|	|	|	0.08
80.917	0.00	0.01	0.007	O	|	|	|	0.08
81.000	0.00	0.01	0.007	O	|	|	|	0.08
81.083	0.00	0.01	0.007	O	|	|	|	0.08
81.167	0.00	0.01	0.007	O	|	|	|	0.08
81.250	0.00	0.01	0.007	O	|	|	|	0.08
81.333	0.00	0.01	0.007	O	|	|	|	0.08
81.417	0.00	0.01	0.007	O	|	|	|	0.08
81.500	0.00	0.01	0.007	O	|	|	|	0.08
81.583	0.00	0.01	0.007	O	|	|	|	0.08
81.667	0.00	0.01	0.007	O	|	|	|	0.08
81.750	0.00	0.01	0.007	O	|	|	|	0.07
81.833	0.00	0.01	0.007	O	|	|	|	0.07
81.917	0.00	0.01	0.007	O	|	|	|	0.07
82.000	0.00	0.01	0.007	O	|	|	|	0.07
82.083	0.00	0.01	0.007	O	|	|	|	0.07
82.167	0.00	0.01	0.007	O	|	|	|	0.07
82.250	0.00	0.01	0.006	O	|	|	|	0.07
82.333	0.00	0.01	0.006	O	|	|	|	0.07
82.417	0.00	0.01	0.006	O	|	|	|	0.07
82.500	0.00	0.01	0.006	O	|	|	|	0.07
82.583	0.00	0.01	0.006	O	|	|	|	0.07
82.667	0.00	0.01	0.006	O	|	|	|	0.07
82.750	0.00	0.01	0.006	O	|	|	|	0.07
82.833	0.00	0.01	0.006	O	|	|	|	0.07
82.917	0.00	0.01	0.006	O	|	|	|	0.07
83.000	0.00	0.01	0.006	O	|	|	|	0.07
83.083	0.00	0.01	0.006	O	|	|	|	0.07
83.167	0.00	0.01	0.006	O	|	|	|	0.07
83.250	0.00	0.01	0.006	O	|	|	|	0.07
83.333	0.00	0.01	0.006	O	|	|	|	0.07
83.417	0.00	0.01	0.006	O	|	|	|	0.07
83.500	0.00	0.01	0.006	O	|	|	|	0.06
83.583	0.00	0.01	0.006	O	|	|	|	0.06
83.667	0.00	0.01	0.006	O	|	|	|	0.06
83.750	0.00	0.01	0.006	O	|	|	|	0.06
83.833	0.00	0.01	0.006	O	|	|	|	0.06
83.917	0.00	0.01	0.006	O	|	|	|	0.06
84.000	0.00	0.01	0.006	O	|	|	|	0.06
84.083	0.00	0.01	0.006	O	|	|	|	0.06
84.167	0.00	0.01	0.006	O	|	|	|	0.06
84.250	0.00	0.01	0.005	O	|	|	|	0.06
84.333	0.00	0.01	0.005	O	|	|	|	0.06
84.417	0.00	0.01	0.005	O	|	|	|	0.06
84.500	0.00	0.01	0.005	O	|	|	|	0.06
84.583	0.00	0.01	0.005	O	|	|	|	0.06
84.667	0.00	0.01	0.005	O	|	|	|	0.06
84.750	0.00	0.01	0.005	O	|	|	|	0.06
84.833	0.00	0.01	0.005	O	|	|	|	0.06

84.917	0.00	0.01	0.005	O	|	|	|	0.06
85.000	0.00	0.01	0.005	O	|	|	|	0.06
85.083	0.00	0.01	0.005	O	|	|	|	0.06
85.167	0.00	0.01	0.005	O	|	|	|	0.06
85.250	0.00	0.01	0.005	O	|	|	|	0.06
85.333	0.00	0.01	0.005	O	|	|	|	0.06
85.417	0.00	0.00	0.005	O	|	|	|	0.06
85.500	0.00	0.00	0.005	O	|	|	|	0.06
85.583	0.00	0.00	0.005	O	|	|	|	0.05
85.667	0.00	0.00	0.005	O	|	|	|	0.05
85.750	0.00	0.00	0.005	O	|	|	|	0.05
85.833	0.00	0.00	0.005	O	|	|	|	0.05
85.917	0.00	0.00	0.005	O	|	|	|	0.05
86.000	0.00	0.00	0.005	O	|	|	|	0.05
86.083	0.00	0.00	0.005	O	|	|	|	0.05
86.167	0.00	0.00	0.005	O	|	|	|	0.05
86.250	0.00	0.00	0.005	O	|	|	|	0.05
86.333	0.00	0.00	0.005	O	|	|	|	0.05
86.417	0.00	0.00	0.005	O	|	|	|	0.05
86.500	0.00	0.00	0.005	O	|	|	|	0.05
86.583	0.00	0.00	0.005	O	|	|	|	0.05
86.667	0.00	0.00	0.004	O	|	|	|	0.05
86.750	0.00	0.00	0.004	O	|	|	|	0.05
86.833	0.00	0.00	0.004	O	|	|	|	0.05
86.917	0.00	0.00	0.004	O	|	|	|	0.05
87.000	0.00	0.00	0.004	O	|	|	|	0.05
87.083	0.00	0.00	0.004	O	|	|	|	0.05
87.167	0.00	0.00	0.004	O	|	|	|	0.05
87.250	0.00	0.00	0.004	O	|	|	|	0.05
87.333	0.00	0.00	0.004	O	|	|	|	0.05
87.417	0.00	0.00	0.004	O	|	|	|	0.05
87.500	0.00	0.00	0.004	O	|	|	|	0.05
87.583	0.00	0.00	0.004	O	|	|	|	0.05
87.667	0.00	0.00	0.004	O	|	|	|	0.05
87.750	0.00	0.00	0.004	O	|	|	|	0.05
87.833	0.00	0.00	0.004	O	|	|	|	0.05
87.917	0.00	0.00	0.004	O	|	|	|	0.05
88.000	0.00	0.00	0.004	O	|	|	|	0.04
88.083	0.00	0.00	0.004	O	|	|	|	0.04
88.167	0.00	0.00	0.004	O	|	|	|	0.04
88.250	0.00	0.00	0.004	O	|	|	|	0.04
88.333	0.00	0.00	0.004	O	|	|	|	0.04
88.417	0.00	0.00	0.004	O	|	|	|	0.04
88.500	0.00	0.00	0.004	O	|	|	|	0.04
88.583	0.00	0.00	0.004	O	|	|	|	0.04
88.667	0.00	0.00	0.004	O	|	|	|	0.04
88.750	0.00	0.00	0.004	O	|	|	|	0.04
88.833	0.00	0.00	0.004	O	|	|	|	0.04
88.917	0.00	0.00	0.004	O	|	|	|	0.04
89.000	0.00	0.00	0.004	O	|	|	|	0.04
89.083	0.00	0.00	0.004	O	|	|	|	0.04
89.167	0.00	0.00	0.004	O	|	|	|	0.04

89.250	0.00	0.00	0.004	O	|	|	|	0.04
89.333	0.00	0.00	0.004	O	|	|	|	0.04
89.417	0.00	0.00	0.004	O	|	|	|	0.04
89.500	0.00	0.00	0.004	O	|	|	|	0.04
89.583	0.00	0.00	0.004	O	|	|	|	0.04
89.667	0.00	0.00	0.004	O	|	|	|	0.04
89.750	0.00	0.00	0.003	O	|	|	|	0.04
89.833	0.00	0.00	0.003	O	|	|	|	0.04
89.917	0.00	0.00	0.003	O	|	|	|	0.04
90.000	0.00	0.00	0.003	O	|	|	|	0.04
90.083	0.00	0.00	0.003	O	|	|	|	0.04
90.167	0.00	0.00	0.003	O	|	|	|	0.04
90.250	0.00	0.00	0.003	O	|	|	|	0.04
90.333	0.00	0.00	0.003	O	|	|	|	0.04
90.417	0.00	0.00	0.003	O	|	|	|	0.04
90.500	0.00	0.00	0.003	O	|	|	|	0.04
90.583	0.00	0.00	0.003	O	|	|	|	0.04
90.667	0.00	0.00	0.003	O	|	|	|	0.04
90.750	0.00	0.00	0.003	O	|	|	|	0.04
90.833	0.00	0.00	0.003	O	|	|	|	0.04
90.917	0.00	0.00	0.003	O	|	|	|	0.04
91.000	0.00	0.00	0.003	O	|	|	|	0.03
91.083	0.00	0.00	0.003	O	|	|	|	0.03
91.167	0.00	0.00	0.003	O	|	|	|	0.03
91.250	0.00	0.00	0.003	O	|	|	|	0.03
91.333	0.00	0.00	0.003	O	|	|	|	0.03
91.417	0.00	0.00	0.003	O	|	|	|	0.03
91.500	0.00	0.00	0.003	O	|	|	|	0.03
91.583	0.00	0.00	0.003	O	|	|	|	0.03
91.667	0.00	0.00	0.003	O	|	|	|	0.03
91.750	0.00	0.00	0.003	O	|	|	|	0.03
91.833	0.00	0.00	0.003	O	|	|	|	0.03
91.917	0.00	0.00	0.003	O	|	|	|	0.03
92.000	0.00	0.00	0.003	O	|	|	|	0.03
92.083	0.00	0.00	0.003	O	|	|	|	0.03
92.167	0.00	0.00	0.003	O	|	|	|	0.03
92.250	0.00	0.00	0.003	O	|	|	|	0.03
92.333	0.00	0.00	0.003	O	|	|	|	0.03
92.417	0.00	0.00	0.003	O	|	|	|	0.03
92.500	0.00	0.00	0.003	O	|	|	|	0.03
92.583	0.00	0.00	0.003	O	|	|	|	0.03
92.667	0.00	0.00	0.003	O	|	|	|	0.03
92.750	0.00	0.00	0.003	O	|	|	|	0.03
92.833	0.00	0.00	0.003	O	|	|	|	0.03
92.917	0.00	0.00	0.003	O	|	|	|	0.03
93.000	0.00	0.00	0.003	O	|	|	|	0.03
93.083	0.00	0.00	0.003	O	|	|	|	0.03
93.167	0.00	0.00	0.003	O	|	|	|	0.03
93.250	0.00	0.00	0.003	O	|	|	|	0.03
93.333	0.00	0.00	0.003	O	|	|	|	0.03
93.417	0.00	0.00	0.003	O	|	|	|	0.03
93.500	0.00	0.00	0.003	O	|	|	|	0.03

93.583	0.00	0.00	0.003	O	|	|	|	0.03
93.667	0.00	0.00	0.003	O	|	|	|	0.03
93.750	0.00	0.00	0.003	O	|	|	|	0.03
93.833	0.00	0.00	0.002	O	|	|	|	0.03
93.917	0.00	0.00	0.002	O	|	|	|	0.03
94.000	0.00	0.00	0.002	O	|	|	|	0.03
94.083	0.00	0.00	0.002	O	|	|	|	0.03
94.167	0.00	0.00	0.002	O	|	|	|	0.03
94.250	0.00	0.00	0.002	O	|	|	|	0.03
94.333	0.00	0.00	0.002	O	|	|	|	0.03
94.417	0.00	0.00	0.002	O	|	|	|	0.03
94.500	0.00	0.00	0.002	O	|	|	|	0.03
94.583	0.00	0.00	0.002	O	|	|	|	0.03
94.667	0.00	0.00	0.002	O	|	|	|	0.03
94.750	0.00	0.00	0.002	O	|	|	|	0.03
94.833	0.00	0.00	0.002	O	|	|	|	0.03
94.917	0.00	0.00	0.002	O	|	|	|	0.03
95.000	0.00	0.00	0.002	O	|	|	|	0.03
95.083	0.00	0.00	0.002	O	|	|	|	0.02
95.167	0.00	0.00	0.002	O	|	|	|	0.02
95.250	0.00	0.00	0.002	O	|	|	|	0.02
95.333	0.00	0.00	0.002	O	|	|	|	0.02
95.417	0.00	0.00	0.002	O	|	|	|	0.02
95.500	0.00	0.00	0.002	O	|	|	|	0.02
95.583	0.00	0.00	0.002	O	|	|	|	0.02
95.667	0.00	0.00	0.002	O	|	|	|	0.02
95.750	0.00	0.00	0.002	O	|	|	|	0.02
95.833	0.00	0.00	0.002	O	|	|	|	0.02
95.917	0.00	0.00	0.002	O	|	|	|	0.02
96.000	0.00	0.00	0.002	O	|	|	|	0.02
96.083	0.00	0.00	0.002	O	|	|	|	0.02
96.167	0.00	0.00	0.002	O	|	|	|	0.02
96.250	0.00	0.00	0.002	O	|	|	|	0.02
96.333	0.00	0.00	0.002	O	|	|	|	0.02
96.417	0.00	0.00	0.002	O	|	|	|	0.02
96.500	0.00	0.00	0.002	O	|	|	|	0.02
96.583	0.00	0.00	0.002	O	|	|	|	0.02
96.667	0.00	0.00	0.002	O	|	|	|	0.02
96.750	0.00	0.00	0.002	O	|	|	|	0.02
96.833	0.00	0.00	0.002	O	|	|	|	0.02
96.917	0.00	0.00	0.002	O	|	|	|	0.02
97.000	0.00	0.00	0.002	O	|	|	|	0.02
97.083	0.00	0.00	0.002	O	|	|	|	0.02
97.167	0.00	0.00	0.002	O	|	|	|	0.02
97.250	0.00	0.00	0.002	O	|	|	|	0.02
97.333	0.00	0.00	0.002	O	|	|	|	0.02
97.417	0.00	0.00	0.002	O	|	|	|	0.02
97.500	0.00	0.00	0.002	O	|	|	|	0.02
97.583	0.00	0.00	0.002	O	|	|	|	0.02
97.667	0.00	0.00	0.002	O	|	|	|	0.02
97.750	0.00	0.00	0.002	O	|	|	|	0.02
97.833	0.00	0.00	0.002	O	|	|	|	0.02

97.917	0.00	0.00	0.002	O	|	|	|	0.02
98.000	0.00	0.00	0.002	O	|	|	|	0.02
98.083	0.00	0.00	0.002	O	|	|	|	0.02
98.167	0.00	0.00	0.002	O	|	|	|	0.02
98.250	0.00	0.00	0.002	O	|	|	|	0.02
98.333	0.00	0.00	0.002	O	|	|	|	0.02
98.417	0.00	0.00	0.002	O	|	|	|	0.02
98.500	0.00	0.00	0.002	O	|	|	|	0.02
98.583	0.00	0.00	0.002	O	|	|	|	0.02
98.667	0.00	0.00	0.002	O	|	|	|	0.02
98.750	0.00	0.00	0.002	O	|	|	|	0.02
98.833	0.00	0.00	0.002	O	|	|	|	0.02
98.917	0.00	0.00	0.002	O	|	|	|	0.02
99.000	0.00	0.00	0.002	O	|	|	|	0.02
99.083	0.00	0.00	0.002	O	|	|	|	0.02
99.167	0.00	0.00	0.002	O	|	|	|	0.02
99.250	0.00	0.00	0.002	O	|	|	|	0.02
99.333	0.00	0.00	0.002	O	|	|	|	0.02
99.417	0.00	0.00	0.002	O	|	|	|	0.02
99.500	0.00	0.00	0.002	O	|	|	|	0.02
99.583	0.00	0.00	0.002	O	|	|	|	0.02
99.667	0.00	0.00	0.002	O	|	|	|	0.02
99.750	0.00	0.00	0.002	O	|	|	|	0.02
99.833	0.00	0.00	0.002	O	|	|	|	0.02
99.917	0.00	0.00	0.002	O	|	|	|	0.02
100.000	0.00	0.00	0.001	O	|	|	|	0.02
100.083	0.00	0.00	0.001	O	|	|	|	0.02
100.167	0.00	0.00	0.001	O	|	|	|	0.02
100.250	0.00	0.00	0.001	O	|	|	|	0.02
100.333	0.00	0.00	0.001	O	|	|	|	0.02
100.417	0.00	0.00	0.001	O	|	|	|	0.02
100.500	0.00	0.00	0.001	O	|	|	|	0.02
100.583	0.00	0.00	0.001	O	|	|	|	0.02
100.667	0.00	0.00	0.001	O	|	|	|	0.02
100.750	0.00	0.00	0.001	O	|	|	|	0.02
100.833	0.00	0.00	0.001	O	|	|	|	0.02
100.917	0.00	0.00	0.001	O	|	|	|	0.02
101.000	0.00	0.00	0.001	O	|	|	|	0.02
101.083	0.00	0.00	0.001	O	|	|	|	0.02
101.167	0.00	0.00	0.001	O	|	|	|	0.02
101.250	0.00	0.00	0.001	O	|	|	|	0.01
101.333	0.00	0.00	0.001	O	|	|	|	0.01
101.417	0.00	0.00	0.001	O	|	|	|	0.01
101.500	0.00	0.00	0.001	O	|	|	|	0.01
101.583	0.00	0.00	0.001	O	|	|	|	0.01
101.667	0.00	0.00	0.001	O	|	|	|	0.01
101.750	0.00	0.00	0.001	O	|	|	|	0.01
101.833	0.00	0.00	0.001	O	|	|	|	0.01
101.917	0.00	0.00	0.001	O	|	|	|	0.01
102.000	0.00	0.00	0.001	O	|	|	|	0.01
102.083	0.00	0.00	0.001	O	|	|	|	0.01
102.167	0.00	0.00	0.001	O	|	|	|	0.01

102.250	0.00	0.00	0.001	O	|	|	|	|	0.01
102.333	0.00	0.00	0.001	O	|	|	|	|	0.01
102.417	0.00	0.00	0.001	O	|	|	|	|	0.01
102.500	0.00	0.00	0.001	O	|	|	|	|	0.01
102.583	0.00	0.00	0.001	O	|	|	|	|	0.01
102.667	0.00	0.00	0.001	O	|	|	|	|	0.01
102.750	0.00	0.00	0.001	O	|	|	|	|	0.01
102.833	0.00	0.00	0.001	O	|	|	|	|	0.01
102.917	0.00	0.00	0.001	O	|	|	|	|	0.01
103.000	0.00	0.00	0.001	O	|	|	|	|	0.01
103.083	0.00	0.00	0.001	O	|	|	|	|	0.01
103.167	0.00	0.00	0.001	O	|	|	|	|	0.01
103.250	0.00	0.00	0.001	O	|	|	|	|	0.01
103.333	0.00	0.00	0.001	O	|	|	|	|	0.01
103.417	0.00	0.00	0.001	O	|	|	|	|	0.01
103.500	0.00	0.00	0.001	O	|	|	|	|	0.01
103.583	0.00	0.00	0.001	O	|	|	|	|	0.01
103.667	0.00	0.00	0.001	O	|	|	|	|	0.01
103.750	0.00	0.00	0.001	O	|	|	|	|	0.01
103.833	0.00	0.00	0.001	O	|	|	|	|	0.01
103.917	0.00	0.00	0.001	O	|	|	|	|	0.01
104.000	0.00	0.00	0.001	O	|	|	|	|	0.01
104.083	0.00	0.00	0.001	O	|	|	|	|	0.01
104.167	0.00	0.00	0.001	O	|	|	|	|	0.01
104.250	0.00	0.00	0.001	O	|	|	|	|	0.01
104.333	0.00	0.00	0.001	O	|	|	|	|	0.01
104.417	0.00	0.00	0.001	O	|	|	|	|	0.01
104.500	0.00	0.00	0.001	O	|	|	|	|	0.01
104.583	0.00	0.00	0.001	O	|	|	|	|	0.01
104.667	0.00	0.00	0.001	O	|	|	|	|	0.01
104.750	0.00	0.00	0.001	O	|	|	|	|	0.01
104.833	0.00	0.00	0.001	O	|	|	|	|	0.01
104.917	0.00	0.00	0.001	O	|	|	|	|	0.01

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

Number of intervals = 1259
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.700 (CFS)
Total volume = 2.493 (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 - 2022
Study date: 12/12/24

TRACT 31513 PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY
BASIN B "EAST"
10-YEAR
24-HOUR

Program License Serial Number 6545

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

From study/file name: TCPB2410.rte
**********HYDROGRAPH DATA**********
Number of intervals = 297
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 15.504 (CFS)
Total volume = 4.673 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 297
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 2.42(Ft.)

Initial basin depth = 2.42 (Ft.)
Initial basin storage = 0.44 (Ac.Ft)
Initial basin outflow = 0.79 (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
1.000	0.090	0.090	0.090	0.090
2.000	0.300	0.130	0.300	0.300
3.000	0.630	1.700	0.624	0.636
4.000	1.010	1.700	1.004	1.016
5.000	1.420	1.700	1.414	1.426
6.000	1.880	1.700	1.874	1.886
7.000	2.390	1.800	2.384	2.396
8.000	2.940	26.490	2.849	3.031
9.000	3.540	130.250	3.091	3.989

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.9 7.75 11.63 15.50	Depth (Ft.)
0.083	0.05	0.75	0.431	IO	2.40
0.167	0.20	0.73	0.426	IO	2.38
0.250	0.26	0.72	0.423	IO	2.37
0.333	0.31	0.70	0.420	IO	2.36
0.417	0.40	0.69	0.418	IO	2.36
0.500	0.44	0.68	0.416	IO	2.35
0.583	0.45	0.67	0.414	IO	2.35
0.667	0.47	0.67	0.413	IO	2.34
0.750	0.47	0.66	0.412	IO	2.34
0.833	0.50	0.66	0.410	|O	2.33
0.917	0.58	0.65	0.410	|O	2.33
1.000	0.61	0.65	0.409	|O	2.33
1.083	0.60	0.65	0.409	|O	2.33
1.167	0.53	0.65	0.408	|O	2.33
1.250	0.51	0.64	0.408	|O	2.33
1.333	0.50	0.64	0.407	|O	2.32
1.417	0.49	0.63	0.406	|O	2.32
1.500	0.49	0.63	0.405	|O	2.32
1.583	0.49	0.62	0.404	|O	2.31
1.667	0.49	0.62	0.403	|O	2.31
1.750	0.48	0.62	0.402	|O	2.31
1.833	0.51	0.61	0.401	|O	2.31
1.917	0.58	0.61	0.401	|O	2.31
2.000	0.61	0.61	0.401	|O	2.30
2.083	0.63	0.61	0.401	|O	2.31
2.167	0.63	0.61	0.401	|O	2.31
2.250	0.64	0.61	0.401	|O	2.31
2.333	0.64	0.61	0.401	|O	2.31
2.417	0.64	0.61	0.401	|O	2.31
2.500	0.64	0.61	0.402	|O	2.31

2.583	0.67	0.61	0.402	O				2.31
2.667	0.74	0.62	0.403	O				2.31
2.750	0.77	0.62	0.404	O				2.31
2.833	0.79	0.63	0.405	O				2.32
2.917	0.79	0.63	0.406	O				2.32
3.000	0.80	0.64	0.407	O				2.32
3.083	0.80	0.64	0.408	O				2.33
3.167	0.80	0.65	0.409	O				2.33
3.250	0.81	0.65	0.410	O				2.33
3.333	0.81	0.66	0.411	O				2.34
3.417	0.81	0.66	0.412	O				2.34
3.500	0.81	0.67	0.413	O				2.34
3.583	0.81	0.67	0.414	O				2.35
3.667	0.81	0.68	0.415	O				2.35
3.750	0.81	0.68	0.416	O				2.35
3.833	0.83	0.69	0.417	O				2.35
3.917	0.91	0.69	0.418	O				2.36
4.000	0.94	0.70	0.420	O				2.36
4.083	0.95	0.71	0.421	O				2.37
4.167	0.96	0.71	0.423	O				2.37
4.250	0.96	0.72	0.424	O				2.38
4.333	0.99	0.73	0.426	OI				2.38
4.417	1.07	0.74	0.428	OI				2.39
4.500	1.10	0.75	0.430	OI				2.40
4.583	1.11	0.76	0.433	OI				2.40
4.667	1.12	0.77	0.435	OI				2.41
4.750	1.12	0.78	0.438	OI				2.42
4.833	1.15	0.80	0.440	OI				2.42
4.917	1.23	0.81	0.443	OI				2.43
5.000	1.26	0.82	0.446	OI				2.44
5.083	1.22	0.84	0.448	OI				2.45
5.167	1.08	0.85	0.451	OI				2.46
5.250	1.03	0.85	0.452	OI				2.46
5.333	1.03	0.86	0.453	OI				2.46
5.417	1.09	0.86	0.454	OI				2.47
5.500	1.11	0.87	0.456	OI				2.47
5.583	1.14	0.88	0.458	OI				2.48
5.667	1.22	0.89	0.460	OI				2.48
5.750	1.25	0.90	0.462	OI				2.49
5.833	1.27	0.91	0.465	OI				2.50
5.917	1.28	0.92	0.467	OI				2.51
6.000	1.28	0.94	0.469	OI				2.51
6.083	1.31	0.95	0.472	OI				2.52
6.167	1.39	0.96	0.475	OI				2.53
6.250	1.42	0.97	0.478	O				2.54
6.333	1.43	0.99	0.481	O				2.55
6.417	1.44	1.00	0.484	O				2.56
6.500	1.44	1.02	0.487	O				2.57
6.583	1.47	1.03	0.490	OI				2.57
6.667	1.55	1.05	0.493	OI				2.58
6.750	1.58	1.06	0.496	OI				2.60
6.833	1.59	1.08	0.500	OI				2.61

6.917	1.60	1.10	0.503	OI				2.62
7.000	1.61	1.11	0.507	OI				2.63
7.083	1.61	1.13	0.510	OI				2.64
7.167	1.61	1.15	0.513	OI				2.65
7.250	1.61	1.16	0.517	OI				2.66
7.333	1.64	1.18	0.520	OI				2.67
7.417	1.71	1.19	0.523	OI				2.68
7.500	1.74	1.21	0.527	OI				2.69
7.583	1.78	1.23	0.530	OI				2.70
7.667	1.86	1.25	0.535	OI				2.71
7.750	1.90	1.27	0.539	OI				2.72
7.833	1.94	1.29	0.543	OI				2.74
7.917	2.02	1.31	0.548	O I				2.75
8.000	2.06	1.33	0.553	O I				2.77
8.083	2.12	1.36	0.558	O I				2.78
8.167	2.28	1.38	0.564	O I				2.80
8.250	2.35	1.41	0.570	O I				2.82
8.333	2.38	1.44	0.576	O I				2.84
8.417	2.39	1.48	0.583	OI				2.86
8.500	2.40	1.50	0.589	OI				2.88
8.583	2.44	1.53	0.595	O I				2.89
8.667	2.51	1.56	0.602	O I				2.91
8.750	2.55	1.60	0.608	O I				2.93
8.833	2.59	1.63	0.615	O I				2.95
8.917	2.67	1.66	0.621	O I				2.97
9.000	2.70	1.69	0.628	O I				3.00
9.083	2.77	1.70	0.636	O I				3.01
9.167	2.93	1.70	0.643	O I				3.04
9.250	2.99	1.70	0.652	O I				3.06
9.333	3.05	1.70	0.661	O I				3.08
9.417	3.14	1.70	0.671	O I				3.11
9.500	3.18	1.70	0.681	O I				3.13
9.583	3.22	1.70	0.691	O I				3.16
9.667	3.31	1.70	0.702	O I				3.19
9.750	3.35	1.70	0.713	O I				3.22
9.833	3.39	1.70	0.725	O I				3.25
9.917	3.47	1.70	0.737	O I				3.28
10.000	3.51	1.70	0.749	O I				3.31
10.083	3.35	1.70	0.761	O I				3.34
10.167	2.84	1.70	0.770	O I				3.37
10.250	2.64	1.70	0.778	O I				3.39
10.333	2.55	1.70	0.784	O I				3.40
10.417	2.51	1.70	0.789	O I				3.42
10.500	2.47	1.70	0.795	O I				3.43
10.583	2.58	1.70	0.801	O I				3.45
10.667	2.94	1.70	0.808	O I				3.47
10.750	3.07	1.70	0.817	O I				3.49
10.833	3.13	1.70	0.826	O I				3.52
10.917	3.16	1.70	0.836	O I				3.54
11.000	3.19	1.70	0.847	O I				3.57
11.083	3.18	1.70	0.857	O I				3.60
11.167	3.11	1.70	0.867	O I				3.62

11.250	3.09	1.70	0.876	O I				3.65
11.333	3.09	1.70	0.886	O I				3.67
11.417	3.08	1.70	0.895	O I				3.70
11.500	3.07	1.70	0.905	O I				3.72
11.583	3.02	1.70	0.914	O I				3.75
11.667	2.87	1.70	0.923	O I				3.77
11.750	2.81	1.70	0.931	O I				3.79
11.833	2.81	1.70	0.938	O I				3.81
11.917	2.87	1.70	0.946	O I				3.83
12.000	2.89	1.70	0.954	O I				3.85
12.083	3.27	1.70	0.964	O I				3.88
12.167	4.43	1.70	0.979	O	I			3.92
12.250	4.94	1.70	0.999	O	I			3.97
12.333	5.36	1.70	1.023	O	I			4.03
12.417	6.02	1.70	1.050	O	I			4.10
12.500	6.36	1.70	1.081	O	I			4.17
12.583	6.89	1.70	1.115	O	I			4.26
12.667	7.98	1.70	1.155	O	I			4.35
12.750	8.49	1.70	1.200	O	I			4.46
12.833	8.92	1.70	1.248	O	I			4.58
12.917	9.58	1.70	1.300	O	I			4.71
13.000	9.92	1.70	1.355	O	I			4.84
13.083	10.90	1.70	1.415	O	I			4.99
13.167	13.37	1.70	1.487	O	I			5.15
13.250	14.41	1.70	1.571	O	I			5.33
13.333	14.93	1.70	1.661	O	I			5.52
13.417	15.26	1.70	1.753	O	I			5.72
13.500	15.50	1.70	1.847	O	I			5.93
13.583	14.03	1.71	1.937	O	I			6.11
13.667	9.11	1.72	2.005	O	I			6.24
13.750	7.27	1.73	2.049	O	I			6.33
13.833	6.54	1.74	2.085	O	I			6.40
13.917	6.13	1.75	2.117	O	I			6.46
14.000	5.90	1.75	2.146	O	I			6.52
14.083	6.38	1.76	2.176	O	I			6.58
14.167	8.17	1.77	2.214	O	I			6.66
14.250	8.87	1.77	2.261	O	I			6.75
14.333	9.05	1.78	2.310	O	I			6.84
14.417	8.86	1.79	2.359	O	I			6.94
14.500	8.88	2.50	2.406	O	I			7.03
14.583	8.97	4.22	2.444	O	I			7.10
14.667	9.07	5.51	2.473	O	I			7.15
14.750	9.16	6.47	2.494	O	I			7.19
14.833	9.10	7.19	2.510	O	I			7.22
14.917	8.71	7.65	2.520	O	I			7.24
15.000	8.60	7.92	2.526	O	I			7.25
15.083	8.45	8.08	2.530	O	I			7.25
15.167	8.03	8.12	2.531	O				7.26
15.250	7.90	8.08	2.530	O				7.25
15.333	7.74	8.01	2.528	O	I			7.25
15.417	7.30	7.88	2.525	O	I			7.25
15.500	7.17	7.71	2.522	O	I			7.24

15.583	6.53	7.48	2.516	|	| I O|	|	|	7.23
15.667	4.71	6.98	2.505	|	|I O |	|	|	7.21
15.750	4.04	6.28	2.490	|	I O |	|	|	7.18
15.833	3.78	5.65	2.476	|	I| O |	|	|	7.16
15.917	3.66	5.13	2.464	|	I| O |	|	|	7.13
16.000	3.62	4.73	2.455	|	I|O |	|	|	7.12
16.083	3.15	4.37	2.447	|	I |O |	|	|	7.10
16.167	1.78	3.86	2.436	| I O|	|	|	|	7.08
16.250	1.23	3.23	2.422	| I O |	|	|	|	7.06
16.333	0.99	2.66	2.409	| I O |	|	|	|	7.03
16.417	0.86	2.20	2.399	|I O |	|	|	|	7.02
16.500	0.78	1.83	2.391	|I O |	|	|	|	7.00
16.583	0.70	1.80	2.383	|I O |	|	|	|	6.99
16.667	0.59	1.80	2.375	|I O |	|	|	|	6.97
16.750	0.53	1.80	2.367	|I O |	|	|	|	6.95
16.833	0.50	1.79	2.358	|I O |	|	|	|	6.94
16.917	0.50	1.79	2.349	|I O |	|	|	|	6.92
17.000	0.49	1.79	2.340	|I O |	|	|	|	6.90
17.083	0.54	1.79	2.331	|I O |	|	|	|	6.89
17.167	0.69	1.79	2.323	|I O |	|	|	|	6.87
17.250	0.74	1.79	2.316	|I O |	|	|	|	6.85
17.333	0.77	1.78	2.309	|I O |	|	|	|	6.84
17.417	0.78	1.78	2.302	|I O |	|	|	|	6.83
17.500	0.79	1.78	2.295	|I O |	|	|	|	6.81
17.583	0.80	1.78	2.288	|I O |	|	|	|	6.80
17.667	0.80	1.78	2.282	|I O |	|	|	|	6.79
17.750	0.80	1.78	2.275	|I O |	|	|	|	6.77
17.833	0.78	1.78	2.268	|I O |	|	|	|	6.76
17.917	0.71	1.77	2.261	|I O |	|	|	|	6.75
18.000	0.68	1.77	2.253	|I O |	|	|	|	6.73
18.083	0.67	1.77	2.246	|I O |	|	|	|	6.72
18.167	0.66	1.77	2.238	|I O |	|	|	|	6.70
18.250	0.65	1.77	2.231	|I O |	|	|	|	6.69
18.333	0.65	1.77	2.223	|I O |	|	|	|	6.67
18.417	0.65	1.77	2.215	|I O |	|	|	|	6.66
18.500	0.65	1.76	2.208	|I O |	|	|	|	6.64
18.583	0.62	1.76	2.200	|I O |	|	|	|	6.63
18.667	0.55	1.76	2.192	|I O |	|	|	|	6.61
18.750	0.52	1.76	2.183	|I O |	|	|	|	6.59
18.833	0.48	1.76	2.174	I O |	|	|	|	6.58
18.917	0.40	1.76	2.165	I O |	|	|	|	6.56
19.000	0.36	1.75	2.156	I O |	|	|	|	6.54
19.083	0.37	1.75	2.146	I O |	|	|	|	6.52
19.167	0.44	1.75	2.137	I O |	|	|	|	6.50
19.250	0.46	1.75	2.128	I O |	|	|	|	6.49
19.333	0.49	1.75	2.119	|I O |	|	|	|	6.47
19.417	0.57	1.75	2.111	|I O |	|	|	|	6.45
19.500	0.61	1.74	2.103	|I O |	|	|	|	6.44
19.583	0.60	1.74	2.095	|I O |	|	|	|	6.42
19.667	0.53	1.74	2.087	|I O |	|	|	|	6.41
19.750	0.51	1.74	2.079	|I O |	|	|	|	6.39
19.833	0.47	1.74	2.070	I O |	|	|	|	6.37

19.917	0.39	1.74	2.061	I	O	|	|	|	|	6.36
20.000	0.36	1.73	2.052	I	O	|	|	|	|	6.34
20.083	0.37	1.73	2.042	I	O	|	|	|	|	6.32
20.167	0.44	1.73	2.033	I	O	|	|	|	|	6.30
20.250	0.46	1.73	2.024	I	O	|	|	|	|	6.28
20.333	0.47	1.73	2.016	I	O	|	|	|	|	6.27
20.417	0.47	1.72	2.007	I	O	|	|	|	|	6.25
20.500	0.48	1.72	1.999	I	O	|	|	|	|	6.23
20.583	0.48	1.72	1.990	I	O	|	|	|	|	6.22
20.667	0.48	1.72	1.981	I	O	|	|	|	|	6.20
20.750	0.48	1.72	1.973	I	O	|	|	|	|	6.18
20.833	0.46	1.72	1.964	I	O	|	|	|	|	6.17
20.917	0.38	1.71	1.955	I	O	|	|	|	|	6.15
21.000	0.36	1.71	1.946	I	O	|	|	|	|	6.13
21.083	0.37	1.71	1.937	I	O	|	|	|	|	6.11
21.167	0.43	1.71	1.928	I	O	|	|	|	|	6.09
21.250	0.46	1.71	1.919	I	O	|	|	|	|	6.08
21.333	0.44	1.71	1.910	I	O	|	|	|	|	6.06
21.417	0.37	1.70	1.902	I	O	|	|	|	|	6.04
21.500	0.35	1.70	1.892	I	O	|	|	|	|	6.02
21.583	0.36	1.70	1.883	I	O	|	|	|	|	6.01
21.667	0.43	1.70	1.874	I	O	|	|	|	|	5.99
21.750	0.46	1.70	1.865	I	O	|	|	|	|	5.97
21.833	0.44	1.70	1.857	I	O	|	|	|	|	5.95
21.917	0.37	1.70	1.848	I	O	|	|	|	|	5.93
22.000	0.35	1.70	1.839	I	O	|	|	|	|	5.91
22.083	0.36	1.70	1.829	I	O	|	|	|	|	5.89
22.167	0.43	1.70	1.820	I	O	|	|	|	|	5.87
22.250	0.46	1.70	1.812	I	O	|	|	|	|	5.85
22.333	0.44	1.70	1.803	I	O	|	|	|	|	5.83
22.417	0.37	1.70	1.794	I	O	|	|	|	|	5.81
22.500	0.35	1.70	1.785	I	O	|	|	|	|	5.79
22.583	0.34	1.70	1.776	I	O	|	|	|	|	5.77
22.667	0.33	1.70	1.766	I	O	|	|	|	|	5.75
22.750	0.33	1.70	1.757	I	O	|	|	|	|	5.73
22.833	0.33	1.70	1.748	I	O	|	|	|	|	5.71
22.917	0.33	1.70	1.738	I	O	|	|	|	|	5.69
23.000	0.32	1.70	1.729	I	O	|	|	|	|	5.67
23.083	0.32	1.70	1.719	I	O	|	|	|	|	5.65
23.167	0.32	1.70	1.710	I	O	|	|	|	|	5.63
23.250	0.32	1.70	1.700	I	O	|	|	|	|	5.61
23.333	0.32	1.70	1.691	I	O	|	|	|	|	5.59
23.417	0.32	1.70	1.681	I	O	|	|	|	|	5.57
23.500	0.32	1.70	1.672	I	O	|	|	|	|	5.55
23.583	0.32	1.70	1.662	I	O	|	|	|	|	5.53
23.667	0.32	1.70	1.653	I	O	|	|	|	|	5.51
23.750	0.32	1.70	1.643	I	O	|	|	|	|	5.49
23.833	0.32	1.70	1.634	I	O	|	|	|	|	5.46
23.917	0.32	1.70	1.624	I	O	|	|	|	|	5.44
24.000	0.32	1.70	1.615	I	O	|	|	|	|	5.42
24.083	0.27	1.70	1.605	I	O	|	|	|	|	5.40
24.167	0.12	1.70	1.595	I	O	|	|	|	|	5.38

24.250	0.07	1.70	1.584	I	O	|	|	|	|	5.36
24.333	0.04	1.70	1.572	I	O	|	|	|	|	5.33
24.417	0.03	1.70	1.561	I	O	|	|	|	|	5.31
24.500	0.02	1.70	1.549	I	O	|	|	|	|	5.28
24.583	0.01	1.70	1.538	I	O	|	|	|	|	5.26
24.667	0.00	1.70	1.526	I	O	|	|	|	|	5.23
24.750	0.00	1.70	1.514	I	O	|	|	|	|	5.21
24.833	0.00	1.70	1.503	I	O	|	|	|	|	5.18
24.917	0.00	1.70	1.491	I	O	|	|	|	|	5.15
25.000	0.00	1.70	1.479	I	O	|	|	|	|	5.13
25.083	0.00	1.70	1.467	I	O	|	|	|	|	5.10
25.167	0.00	1.70	1.456	I	O	|	|	|	|	5.08
25.250	0.00	1.70	1.444	I	O	|	|	|	|	5.05
25.333	0.00	1.70	1.432	I	O	|	|	|	|	5.03
25.417	0.00	1.70	1.421	I	O	|	|	|	|	5.00
25.500	0.00	1.70	1.409	I	O	|	|	|	|	4.97
25.583	0.00	1.70	1.397	I	O	|	|	|	|	4.94
25.667	0.00	1.70	1.386	I	O	|	|	|	|	4.92
25.750	0.00	1.70	1.374	I	O	|	|	|	|	4.89
25.833	0.00	1.70	1.362	I	O	|	|	|	|	4.86
25.917	0.00	1.70	1.350	I	O	|	|	|	|	4.83
26.000	0.00	1.70	1.339	I	O	|	|	|	|	4.80
26.083	0.00	1.70	1.327	I	O	|	|	|	|	4.77
26.167	0.00	1.70	1.315	I	O	|	|	|	|	4.74
26.250	0.00	1.70	1.304	I	O	|	|	|	|	4.72
26.333	0.00	1.70	1.292	I	O	|	|	|	|	4.69
26.417	0.00	1.70	1.280	I	O	|	|	|	|	4.66
26.500	0.00	1.70	1.268	I	O	|	|	|	|	4.63
26.583	0.00	1.70	1.257	I	O	|	|	|	|	4.60
26.667	0.00	1.70	1.245	I	O	|	|	|	|	4.57
26.750	0.00	1.70	1.233	I	O	|	|	|	|	4.54
26.833	0.00	1.70	1.222	I	O	|	|	|	|	4.52
26.917	0.00	1.70	1.210	I	O	|	|	|	|	4.49
27.000	0.00	1.70	1.198	I	O	|	|	|	|	4.46
27.083	0.00	1.70	1.187	I	O	|	|	|	|	4.43
27.167	0.00	1.70	1.175	I	O	|	|	|	|	4.40
27.250	0.00	1.70	1.163	I	O	|	|	|	|	4.37
27.333	0.00	1.70	1.151	I	O	|	|	|	|	4.34
27.417	0.00	1.70	1.140	I	O	|	|	|	|	4.32
27.500	0.00	1.70	1.128	I	O	|	|	|	|	4.29
27.583	0.00	1.70	1.116	I	O	|	|	|	|	4.26
27.667	0.00	1.70	1.105	I	O	|	|	|	|	4.23
27.750	0.00	1.70	1.093	I	O	|	|	|	|	4.20
27.833	0.00	1.70	1.081	I	O	|	|	|	|	4.17
27.917	0.00	1.70	1.069	I	O	|	|	|	|	4.14
28.000	0.00	1.70	1.058	I	O	|	|	|	|	4.12
28.083	0.00	1.70	1.046	I	O	|	|	|	|	4.09
28.167	0.00	1.70	1.034	I	O	|	|	|	|	4.06
28.250	0.00	1.70	1.023	I	O	|	|	|	|	4.03
28.333	0.00	1.70	1.011	I	O	|	|	|	|	4.00
28.417	0.00	1.70	0.999	I	O	|	|	|	|	3.97
28.500	0.00	1.70	0.987	I	O	|	|	|	|	3.94

28.583	0.00	1.70	0.976	I	O	|	|	|	3.91
28.667	0.00	1.70	0.964	I	O	|	|	|	3.88
28.750	0.00	1.70	0.952	I	O	|	|	|	3.85
28.833	0.00	1.70	0.941	I	O	|	|	|	3.82
28.917	0.00	1.70	0.929	I	O	|	|	|	3.79
29.000	0.00	1.70	0.917	I	O	|	|	|	3.76
29.083	0.00	1.70	0.906	I	O	|	|	|	3.73
29.167	0.00	1.70	0.894	I	O	|	|	|	3.69
29.250	0.00	1.70	0.882	I	O	|	|	|	3.66
29.333	0.00	1.70	0.870	I	O	|	|	|	3.63
29.417	0.00	1.70	0.859	I	O	|	|	|	3.60
29.500	0.00	1.70	0.847	I	O	|	|	|	3.57
29.583	0.00	1.70	0.835	I	O	|	|	|	3.54
29.667	0.00	1.70	0.824	I	O	|	|	|	3.51
29.750	0.00	1.70	0.812	I	O	|	|	|	3.48
29.833	0.00	1.70	0.800	I	O	|	|	|	3.45
29.917	0.00	1.70	0.788	I	O	|	|	|	3.42
30.000	0.00	1.70	0.777	I	O	|	|	|	3.39
30.083	0.00	1.70	0.765	I	O	|	|	|	3.36
30.167	0.00	1.70	0.753	I	O	|	|	|	3.32
30.250	0.00	1.70	0.742	I	O	|	|	|	3.29
30.333	0.00	1.70	0.730	I	O	|	|	|	3.26
30.417	0.00	1.70	0.718	I	O	|	|	|	3.23
30.500	0.00	1.70	0.706	I	O	|	|	|	3.20
30.583	0.00	1.70	0.695	I	O	|	|	|	3.17
30.667	0.00	1.70	0.683	I	O	|	|	|	3.14
30.750	0.00	1.70	0.671	I	O	|	|	|	3.11
30.833	0.00	1.70	0.660	I	O	|	|	|	3.08
30.917	0.00	1.70	0.648	I	O	|	|	|	3.05
31.000	0.00	1.70	0.636	I	O	|	|	|	3.02
31.083	0.00	1.67	0.625	I	O	|	|	|	2.98
31.167	0.00	1.62	0.613	I	O	|	|	|	2.95
31.250	0.00	1.57	0.602	I	O	|	|	|	2.92
31.333	0.00	1.52	0.592	I	O	|	|	|	2.88
31.417	0.00	1.47	0.581	I	O	|	|	|	2.85
31.500	0.00	1.42	0.571	I	O	|	|	|	2.82
31.583	0.00	1.38	0.562	I	O	|	|	|	2.79
31.667	0.00	1.33	0.552	I	O	|	|	|	2.77
31.750	0.00	1.29	0.543	I	O	|	|	|	2.74
31.833	0.00	1.25	0.535	I	O	|	|	|	2.71
31.917	0.00	1.21	0.526	I	O	|	|	|	2.69
32.000	0.00	1.17	0.518	I	O	|	|	|	2.66
32.083	0.00	1.13	0.510	I	O	|	|	|	2.64
32.167	0.00	1.09	0.503	I	O	|	|	|	2.61
32.250	0.00	1.06	0.495	I	O	|	|	|	2.59
32.333	0.00	1.02	0.488	I	O	|	|	|	2.57
32.417	0.00	0.99	0.481	I	O	|	|	|	2.55
32.500	0.00	0.96	0.474	I	O	|	|	|	2.53
32.583	0.00	0.93	0.468	I	O	|	|	|	2.51
32.667	0.00	0.90	0.462	I	O	|	|	|	2.49
32.750	0.00	0.87	0.455	I	O	|	|	|	2.47
32.833	0.00	0.84	0.450	I	O	|	|	|	2.45

32.917	0.00	0.81	0.444	IO				2.44
33.000	0.00	0.79	0.438	IO				2.42
33.083	0.00	0.76	0.433	IO				2.40
33.167	0.00	0.74	0.428	IO				2.39
33.250	0.00	0.71	0.423	IO				2.37
33.333	0.00	0.69	0.418	IO				2.36
33.417	0.00	0.67	0.413	IO				2.34
33.500	0.00	0.65	0.409	IO				2.33
33.583	0.00	0.63	0.404	IO				2.32
33.667	0.00	0.61	0.400	IO				2.30
33.750	0.00	0.59	0.396	IO				2.29
33.833	0.00	0.57	0.392	IO				2.28
33.917	0.00	0.55	0.388	IO				2.27
34.000	0.00	0.53	0.384	IO				2.26
34.083	0.00	0.51	0.381	IO				2.25
34.167	0.00	0.50	0.377	IO				2.23
34.250	0.00	0.48	0.374	O				2.22
34.333	0.00	0.47	0.371	O				2.21
34.417	0.00	0.45	0.368	O				2.20
34.500	0.00	0.44	0.365	O				2.20
34.583	0.00	0.42	0.362	O				2.19
34.667	0.00	0.41	0.359	O				2.18
34.750	0.00	0.40	0.356	O				2.17
34.833	0.00	0.38	0.353	O				2.16
34.917	0.00	0.37	0.351	O				2.15
35.000	0.00	0.36	0.348	O				2.15
35.083	0.00	0.35	0.346	O				2.14
35.167	0.00	0.34	0.343	O				2.13
35.250	0.00	0.33	0.341	O				2.12
35.333	0.00	0.31	0.339	O				2.12
35.417	0.00	0.30	0.337	O				2.11
35.500	0.00	0.29	0.335	O				2.10
35.583	0.00	0.29	0.333	O				2.10
35.667	0.00	0.28	0.331	O				2.09
35.750	0.00	0.27	0.329	O				2.09
35.833	0.00	0.26	0.327	O				2.08
35.917	0.00	0.25	0.325	O				2.08
36.000	0.00	0.24	0.324	O				2.07
36.083	0.00	0.23	0.322	O				2.07
36.167	0.00	0.23	0.320	O				2.06
36.250	0.00	0.22	0.319	O				2.06
36.333	0.00	0.21	0.317	O				2.05
36.417	0.00	0.21	0.316	O				2.05
36.500	0.00	0.20	0.315	O				2.04
36.583	0.00	0.19	0.313	O				2.04
36.667	0.00	0.19	0.312	O				2.04
36.750	0.00	0.18	0.311	O				2.03
36.833	0.00	0.17	0.309	O				2.03
36.917	0.00	0.17	0.308	O				2.02
37.000	0.00	0.16	0.307	O				2.02
37.083	0.00	0.16	0.306	O				2.02
37.167	0.00	0.15	0.305	O				2.01

37.250	0.00	0.15	0.304	O	|	|	|	|	2.01
37.333	0.00	0.14	0.303	O	|	|	|	|	2.01
37.417	0.00	0.14	0.302	O	|	|	|	|	2.01
37.500	0.00	0.13	0.301	O	|	|	|	|	2.00
37.583	0.00	0.13	0.300	O	|	|	|	|	2.00
37.667	0.00	0.13	0.299	O	|	|	|	|	2.00
37.750	0.00	0.13	0.298	O	|	|	|	|	1.99
37.833	0.00	0.13	0.297	O	|	|	|	|	1.99
37.917	0.00	0.13	0.296	O	|	|	|	|	1.98
38.000	0.00	0.13	0.296	O	|	|	|	|	1.98
38.083	0.00	0.13	0.295	O	|	|	|	|	1.97
38.167	0.00	0.13	0.294	O	|	|	|	|	1.97
38.250	0.00	0.13	0.293	O	|	|	|	|	1.97
38.333	0.00	0.13	0.292	O	|	|	|	|	1.96
38.417	0.00	0.13	0.291	O	|	|	|	|	1.96
38.500	0.00	0.13	0.290	O	|	|	|	|	1.95
38.583	0.00	0.13	0.289	O	|	|	|	|	1.95
38.667	0.00	0.13	0.288	O	|	|	|	|	1.95
38.750	0.00	0.13	0.288	O	|	|	|	|	1.94
38.833	0.00	0.13	0.287	O	|	|	|	|	1.94
38.917	0.00	0.13	0.286	O	|	|	|	|	1.93
39.000	0.00	0.13	0.285	O	|	|	|	|	1.93
39.083	0.00	0.13	0.284	O	|	|	|	|	1.92
39.167	0.00	0.13	0.283	O	|	|	|	|	1.92
39.250	0.00	0.13	0.282	O	|	|	|	|	1.92
39.333	0.00	0.13	0.281	O	|	|	|	|	1.91
39.417	0.00	0.13	0.281	O	|	|	|	|	1.91
39.500	0.00	0.13	0.280	O	|	|	|	|	1.90
39.583	0.00	0.13	0.279	O	|	|	|	|	1.90
39.667	0.00	0.13	0.278	O	|	|	|	|	1.90
39.750	0.00	0.13	0.277	O	|	|	|	|	1.89
39.833	0.00	0.13	0.276	O	|	|	|	|	1.89
39.917	0.00	0.13	0.275	O	|	|	|	|	1.88
40.000	0.00	0.13	0.275	O	|	|	|	|	1.88
40.083	0.00	0.12	0.274	O	|	|	|	|	1.87
40.167	0.00	0.12	0.273	O	|	|	|	|	1.87
40.250	0.00	0.12	0.272	O	|	|	|	|	1.87
40.333	0.00	0.12	0.271	O	|	|	|	|	1.86
40.417	0.00	0.12	0.270	O	|	|	|	|	1.86
40.500	0.00	0.12	0.269	O	|	|	|	|	1.85
40.583	0.00	0.12	0.269	O	|	|	|	|	1.85
40.667	0.00	0.12	0.268	O	|	|	|	|	1.85
40.750	0.00	0.12	0.267	O	|	|	|	|	1.84
40.833	0.00	0.12	0.266	O	|	|	|	|	1.84
40.917	0.00	0.12	0.265	O	|	|	|	|	1.83
41.000	0.00	0.12	0.264	O	|	|	|	|	1.83
41.083	0.00	0.12	0.263	O	|	|	|	|	1.83
41.167	0.00	0.12	0.263	O	|	|	|	|	1.82
41.250	0.00	0.12	0.262	O	|	|	|	|	1.82
41.333	0.00	0.12	0.261	O	|	|	|	|	1.81
41.417	0.00	0.12	0.260	O	|	|	|	|	1.81
41.500	0.00	0.12	0.259	O	|	|	|	|	1.81

41.583	0.00	0.12	0.258	O	|	|	|	1.80
41.667	0.00	0.12	0.258	O	|	|	|	1.80
41.750	0.00	0.12	0.257	O	|	|	|	1.79
41.833	0.00	0.12	0.256	O	|	|	|	1.79
41.917	0.00	0.12	0.255	O	|	|	|	1.79
42.000	0.00	0.12	0.254	O	|	|	|	1.78
42.083	0.00	0.12	0.253	O	|	|	|	1.78
42.167	0.00	0.12	0.252	O	|	|	|	1.77
42.250	0.00	0.12	0.252	O	|	|	|	1.77
42.333	0.00	0.12	0.251	O	|	|	|	1.77
42.417	0.00	0.12	0.250	O	|	|	|	1.76
42.500	0.00	0.12	0.249	O	|	|	|	1.76
42.583	0.00	0.12	0.248	O	|	|	|	1.75
42.667	0.00	0.12	0.248	O	|	|	|	1.75
42.750	0.00	0.12	0.247	O	|	|	|	1.75
42.833	0.00	0.12	0.246	O	|	|	|	1.74
42.917	0.00	0.12	0.245	O	|	|	|	1.74
43.000	0.00	0.12	0.244	O	|	|	|	1.73
43.083	0.00	0.12	0.243	O	|	|	|	1.73
43.167	0.00	0.12	0.243	O	|	|	|	1.73
43.250	0.00	0.12	0.242	O	|	|	|	1.72
43.333	0.00	0.12	0.241	O	|	|	|	1.72
43.417	0.00	0.12	0.240	O	|	|	|	1.71
43.500	0.00	0.12	0.239	O	|	|	|	1.71
43.583	0.00	0.12	0.238	O	|	|	|	1.71
43.667	0.00	0.12	0.238	O	|	|	|	1.70
43.750	0.00	0.12	0.237	O	|	|	|	1.70
43.833	0.00	0.12	0.236	O	|	|	|	1.70
43.917	0.00	0.12	0.235	O	|	|	|	1.69
44.000	0.00	0.12	0.234	O	|	|	|	1.69
44.083	0.00	0.12	0.234	O	|	|	|	1.68
44.167	0.00	0.12	0.233	O	|	|	|	1.68
44.250	0.00	0.12	0.232	O	|	|	|	1.68
44.333	0.00	0.12	0.231	O	|	|	|	1.67
44.417	0.00	0.12	0.230	O	|	|	|	1.67
44.500	0.00	0.12	0.230	O	|	|	|	1.66
44.583	0.00	0.12	0.229	O	|	|	|	1.66
44.667	0.00	0.12	0.228	O	|	|	|	1.66
44.750	0.00	0.12	0.227	O	|	|	|	1.65
44.833	0.00	0.12	0.226	O	|	|	|	1.65
44.917	0.00	0.12	0.226	O	|	|	|	1.65
45.000	0.00	0.12	0.225	O	|	|	|	1.64
45.083	0.00	0.12	0.224	O	|	|	|	1.64
45.167	0.00	0.12	0.223	O	|	|	|	1.63
45.250	0.00	0.12	0.222	O	|	|	|	1.63
45.333	0.00	0.12	0.222	O	|	|	|	1.63
45.417	0.00	0.11	0.221	O	|	|	|	1.62
45.500	0.00	0.11	0.220	O	|	|	|	1.62
45.583	0.00	0.11	0.219	O	|	|	|	1.62
45.667	0.00	0.11	0.218	O	|	|	|	1.61
45.750	0.00	0.11	0.218	O	|	|	|	1.61
45.833	0.00	0.11	0.217	O	|	|	|	1.60

45.917	0.00	0.11	0.216	O	|	|	|	|	1.60
46.000	0.00	0.11	0.215	O	|	|	|	|	1.60
46.083	0.00	0.11	0.215	O	|	|	|	|	1.59
46.167	0.00	0.11	0.214	O	|	|	|	|	1.59
46.250	0.00	0.11	0.213	O	|	|	|	|	1.59
46.333	0.00	0.11	0.212	O	|	|	|	|	1.58
46.417	0.00	0.11	0.211	O	|	|	|	|	1.58
46.500	0.00	0.11	0.211	O	|	|	|	|	1.57
46.583	0.00	0.11	0.210	O	|	|	|	|	1.57
46.667	0.00	0.11	0.209	O	|	|	|	|	1.57
46.750	0.00	0.11	0.208	O	|	|	|	|	1.56
46.833	0.00	0.11	0.208	O	|	|	|	|	1.56
46.917	0.00	0.11	0.207	O	|	|	|	|	1.56
47.000	0.00	0.11	0.206	O	|	|	|	|	1.55
47.083	0.00	0.11	0.205	O	|	|	|	|	1.55
47.167	0.00	0.11	0.204	O	|	|	|	|	1.54
47.250	0.00	0.11	0.204	O	|	|	|	|	1.54
47.333	0.00	0.11	0.203	O	|	|	|	|	1.54
47.417	0.00	0.11	0.202	O	|	|	|	|	1.53
47.500	0.00	0.11	0.201	O	|	|	|	|	1.53
47.583	0.00	0.11	0.201	O	|	|	|	|	1.53
47.667	0.00	0.11	0.200	O	|	|	|	|	1.52
47.750	0.00	0.11	0.199	O	|	|	|	|	1.52
47.833	0.00	0.11	0.198	O	|	|	|	|	1.52
47.917	0.00	0.11	0.198	O	|	|	|	|	1.51
48.000	0.00	0.11	0.197	O	|	|	|	|	1.51
48.083	0.00	0.11	0.196	O	|	|	|	|	1.50
48.167	0.00	0.11	0.195	O	|	|	|	|	1.50
48.250	0.00	0.11	0.194	O	|	|	|	|	1.50
48.333	0.00	0.11	0.194	O	|	|	|	|	1.49
48.417	0.00	0.11	0.193	O	|	|	|	|	1.49
48.500	0.00	0.11	0.192	O	|	|	|	|	1.49
48.583	0.00	0.11	0.191	O	|	|	|	|	1.48
48.667	0.00	0.11	0.191	O	|	|	|	|	1.48
48.750	0.00	0.11	0.190	O	|	|	|	|	1.48
48.833	0.00	0.11	0.189	O	|	|	|	|	1.47
48.917	0.00	0.11	0.188	O	|	|	|	|	1.47
49.000	0.00	0.11	0.188	O	|	|	|	|	1.47
49.083	0.00	0.11	0.187	O	|	|	|	|	1.46
49.167	0.00	0.11	0.186	O	|	|	|	|	1.46
49.250	0.00	0.11	0.185	O	|	|	|	|	1.45
49.333	0.00	0.11	0.185	O	|	|	|	|	1.45
49.417	0.00	0.11	0.184	O	|	|	|	|	1.45
49.500	0.00	0.11	0.183	O	|	|	|	|	1.44
49.583	0.00	0.11	0.183	O	|	|	|	|	1.44
49.667	0.00	0.11	0.182	O	|	|	|	|	1.44
49.750	0.00	0.11	0.181	O	|	|	|	|	1.43
49.833	0.00	0.11	0.180	O	|	|	|	|	1.43
49.917	0.00	0.11	0.180	O	|	|	|	|	1.43
50.000	0.00	0.11	0.179	O	|	|	|	|	1.42
50.083	0.00	0.11	0.178	O	|	|	|	|	1.42
50.167	0.00	0.11	0.177	O	|	|	|	|	1.42

50.250	0.00	0.11	0.177	O	|	|	|	|	1.41
50.333	0.00	0.11	0.176	O	|	|	|	|	1.41
50.417	0.00	0.11	0.175	O	|	|	|	|	1.41
50.500	0.00	0.11	0.174	O	|	|	|	|	1.40
50.583	0.00	0.11	0.174	O	|	|	|	|	1.40
50.667	0.00	0.11	0.173	O	|	|	|	|	1.40
50.750	0.00	0.11	0.172	O	|	|	|	|	1.39
50.833	0.00	0.11	0.172	O	|	|	|	|	1.39
50.917	0.00	0.11	0.171	O	|	|	|	|	1.38
51.000	0.00	0.11	0.170	O	|	|	|	|	1.38
51.083	0.00	0.11	0.169	O	|	|	|	|	1.38
51.167	0.00	0.10	0.169	O	|	|	|	|	1.37
51.250	0.00	0.10	0.168	O	|	|	|	|	1.37
51.333	0.00	0.10	0.167	O	|	|	|	|	1.37
51.417	0.00	0.10	0.166	O	|	|	|	|	1.36
51.500	0.00	0.10	0.166	O	|	|	|	|	1.36
51.583	0.00	0.10	0.165	O	|	|	|	|	1.36
51.667	0.00	0.10	0.164	O	|	|	|	|	1.35
51.750	0.00	0.10	0.164	O	|	|	|	|	1.35
51.833	0.00	0.10	0.163	O	|	|	|	|	1.35
51.917	0.00	0.10	0.162	O	|	|	|	|	1.34
52.000	0.00	0.10	0.161	O	|	|	|	|	1.34
52.083	0.00	0.10	0.161	O	|	|	|	|	1.34
52.167	0.00	0.10	0.160	O	|	|	|	|	1.33
52.250	0.00	0.10	0.159	O	|	|	|	|	1.33
52.333	0.00	0.10	0.159	O	|	|	|	|	1.33
52.417	0.00	0.10	0.158	O	|	|	|	|	1.32
52.500	0.00	0.10	0.157	O	|	|	|	|	1.32
52.583	0.00	0.10	0.156	O	|	|	|	|	1.32
52.667	0.00	0.10	0.156	O	|	|	|	|	1.31
52.750	0.00	0.10	0.155	O	|	|	|	|	1.31
52.833	0.00	0.10	0.154	O	|	|	|	|	1.31
52.917	0.00	0.10	0.154	O	|	|	|	|	1.30
53.000	0.00	0.10	0.153	O	|	|	|	|	1.30
53.083	0.00	0.10	0.152	O	|	|	|	|	1.30
53.167	0.00	0.10	0.152	O	|	|	|	|	1.29
53.250	0.00	0.10	0.151	O	|	|	|	|	1.29
53.333	0.00	0.10	0.150	O	|	|	|	|	1.29
53.417	0.00	0.10	0.149	O	|	|	|	|	1.28
53.500	0.00	0.10	0.149	O	|	|	|	|	1.28
53.583	0.00	0.10	0.148	O	|	|	|	|	1.28
53.667	0.00	0.10	0.147	O	|	|	|	|	1.27
53.750	0.00	0.10	0.147	O	|	|	|	|	1.27
53.833	0.00	0.10	0.146	O	|	|	|	|	1.27
53.917	0.00	0.10	0.145	O	|	|	|	|	1.26
54.000	0.00	0.10	0.145	O	|	|	|	|	1.26
54.083	0.00	0.10	0.144	O	|	|	|	|	1.26
54.167	0.00	0.10	0.143	O	|	|	|	|	1.25
54.250	0.00	0.10	0.142	O	|	|	|	|	1.25
54.333	0.00	0.10	0.142	O	|	|	|	|	1.25
54.417	0.00	0.10	0.141	O	|	|	|	|	1.24
54.500	0.00	0.10	0.140	O	|	|	|	|	1.24

54.583	0.00	0.10	0.140	O	|	|	|	1.24
54.667	0.00	0.10	0.139	O	|	|	|	1.23
54.750	0.00	0.10	0.138	O	|	|	|	1.23
54.833	0.00	0.10	0.138	O	|	|	|	1.23
54.917	0.00	0.10	0.137	O	|	|	|	1.22
55.000	0.00	0.10	0.136	O	|	|	|	1.22
55.083	0.00	0.10	0.136	O	|	|	|	1.22
55.167	0.00	0.10	0.135	O	|	|	|	1.21
55.250	0.00	0.10	0.134	O	|	|	|	1.21
55.333	0.00	0.10	0.134	O	|	|	|	1.21
55.417	0.00	0.10	0.133	O	|	|	|	1.20
55.500	0.00	0.10	0.132	O	|	|	|	1.20
55.583	0.00	0.10	0.132	O	|	|	|	1.20
55.667	0.00	0.10	0.131	O	|	|	|	1.19
55.750	0.00	0.10	0.130	O	|	|	|	1.19
55.833	0.00	0.10	0.130	O	|	|	|	1.19
55.917	0.00	0.10	0.129	O	|	|	|	1.19
56.000	0.00	0.10	0.128	O	|	|	|	1.18
56.083	0.00	0.10	0.128	O	|	|	|	1.18
56.167	0.00	0.10	0.127	O	|	|	|	1.18
56.250	0.00	0.10	0.126	O	|	|	|	1.17
56.333	0.00	0.10	0.126	O	|	|	|	1.17
56.417	0.00	0.10	0.125	O	|	|	|	1.17
56.500	0.00	0.10	0.124	O	|	|	|	1.16
56.583	0.00	0.10	0.124	O	|	|	|	1.16
56.667	0.00	0.10	0.123	O	|	|	|	1.16
56.750	0.00	0.10	0.122	O	|	|	|	1.15
56.833	0.00	0.10	0.122	O	|	|	|	1.15
56.917	0.00	0.10	0.121	O	|	|	|	1.15
57.000	0.00	0.10	0.120	O	|	|	|	1.14
57.083	0.00	0.10	0.120	O	|	|	|	1.14
57.167	0.00	0.10	0.119	O	|	|	|	1.14
57.250	0.00	0.10	0.118	O	|	|	|	1.13
57.333	0.00	0.10	0.118	O	|	|	|	1.13
57.417	0.00	0.10	0.117	O	|	|	|	1.13
57.500	0.00	0.10	0.116	O	|	|	|	1.13
57.583	0.00	0.09	0.116	O	|	|	|	1.12
57.667	0.00	0.09	0.115	O	|	|	|	1.12
57.750	0.00	0.09	0.114	O	|	|	|	1.12
57.833	0.00	0.09	0.114	O	|	|	|	1.11
57.917	0.00	0.09	0.113	O	|	|	|	1.11
58.000	0.00	0.09	0.112	O	|	|	|	1.11
58.083	0.00	0.09	0.112	O	|	|	|	1.10
58.167	0.00	0.09	0.111	O	|	|	|	1.10
58.250	0.00	0.09	0.110	O	|	|	|	1.10
58.333	0.00	0.09	0.110	O	|	|	|	1.09
58.417	0.00	0.09	0.109	O	|	|	|	1.09
58.500	0.00	0.09	0.109	O	|	|	|	1.09
58.583	0.00	0.09	0.108	O	|	|	|	1.09
58.667	0.00	0.09	0.107	O	|	|	|	1.08
58.750	0.00	0.09	0.107	O	|	|	|	1.08
58.833	0.00	0.09	0.106	O	|	|	|	1.08

58.917	0.00	0.09	0.105	O	|	|	|	|	1.07
59.000	0.00	0.09	0.105	O	|	|	|	|	1.07
59.083	0.00	0.09	0.104	O	|	|	|	|	1.07
59.167	0.00	0.09	0.103	O	|	|	|	|	1.06
59.250	0.00	0.09	0.103	O	|	|	|	|	1.06
59.333	0.00	0.09	0.102	O	|	|	|	|	1.06
59.417	0.00	0.09	0.101	O	|	|	|	|	1.05
59.500	0.00	0.09	0.101	O	|	|	|	|	1.05
59.583	0.00	0.09	0.100	O	|	|	|	|	1.05
59.667	0.00	0.09	0.100	O	|	|	|	|	1.05
59.750	0.00	0.09	0.099	O	|	|	|	|	1.04
59.833	0.00	0.09	0.098	O	|	|	|	|	1.04
59.917	0.00	0.09	0.098	O	|	|	|	|	1.04
60.000	0.00	0.09	0.097	O	|	|	|	|	1.03
60.083	0.00	0.09	0.096	O	|	|	|	|	1.03
60.167	0.00	0.09	0.096	O	|	|	|	|	1.03
60.250	0.00	0.09	0.095	O	|	|	|	|	1.02
60.333	0.00	0.09	0.095	O	|	|	|	|	1.02
60.417	0.00	0.09	0.094	O	|	|	|	|	1.02
60.500	0.00	0.09	0.093	O	|	|	|	|	1.02
60.583	0.00	0.09	0.093	O	|	|	|	|	1.01
60.667	0.00	0.09	0.092	O	|	|	|	|	1.01
60.750	0.00	0.09	0.091	O	|	|	|	|	1.01
60.833	0.00	0.09	0.091	O	|	|	|	|	1.00
60.917	0.00	0.09	0.090	O	|	|	|	|	1.00
61.000	0.00	0.09	0.090	O	|	|	|	|	1.00
61.083	0.00	0.09	0.089	O	|	|	|	|	0.99
61.167	0.00	0.09	0.088	O	|	|	|	|	0.98
61.250	0.00	0.09	0.088	O	|	|	|	|	0.97
61.333	0.00	0.09	0.087	O	|	|	|	|	0.97
61.417	0.00	0.09	0.087	O	|	|	|	|	0.96
61.500	0.00	0.09	0.086	O	|	|	|	|	0.95
61.583	0.00	0.09	0.085	O	|	|	|	|	0.95
61.667	0.00	0.08	0.085	O	|	|	|	|	0.94
61.750	0.00	0.08	0.084	O	|	|	|	|	0.94
61.833	0.00	0.08	0.084	O	|	|	|	|	0.93
61.917	0.00	0.08	0.083	O	|	|	|	|	0.92
62.000	0.00	0.08	0.082	O	|	|	|	|	0.92
62.083	0.00	0.08	0.082	O	|	|	|	|	0.91
62.167	0.00	0.08	0.081	O	|	|	|	|	0.90
62.250	0.00	0.08	0.081	O	|	|	|	|	0.90
62.333	0.00	0.08	0.080	O	|	|	|	|	0.89
62.417	0.00	0.08	0.080	O	|	|	|	|	0.89
62.500	0.00	0.08	0.079	O	|	|	|	|	0.88
62.583	0.00	0.08	0.079	O	|	|	|	|	0.87
62.667	0.00	0.08	0.078	O	|	|	|	|	0.87
62.750	0.00	0.08	0.078	O	|	|	|	|	0.86
62.833	0.00	0.08	0.077	O	|	|	|	|	0.86
62.917	0.00	0.08	0.076	O	|	|	|	|	0.85
63.000	0.00	0.08	0.076	O	|	|	|	|	0.84
63.083	0.00	0.08	0.075	O	|	|	|	|	0.84
63.167	0.00	0.07	0.075	O	|	|	|	|	0.83

63.250	0.00	0.07	0.074	O	|	|	|	0.83
63.333	0.00	0.07	0.074	O	|	|	|	0.82
63.417	0.00	0.07	0.073	O	|	|	|	0.82
63.500	0.00	0.07	0.073	O	|	|	|	0.81
63.583	0.00	0.07	0.072	O	|	|	|	0.80
63.667	0.00	0.07	0.072	O	|	|	|	0.80
63.750	0.00	0.07	0.071	O	|	|	|	0.79
63.833	0.00	0.07	0.071	O	|	|	|	0.79
63.917	0.00	0.07	0.070	O	|	|	|	0.78
64.000	0.00	0.07	0.070	O	|	|	|	0.78
64.083	0.00	0.07	0.069	O	|	|	|	0.77
64.167	0.00	0.07	0.069	O	|	|	|	0.77
64.250	0.00	0.07	0.068	O	|	|	|	0.76
64.333	0.00	0.07	0.068	O	|	|	|	0.76
64.417	0.00	0.07	0.068	O	|	|	|	0.75
64.500	0.00	0.07	0.067	O	|	|	|	0.75
64.583	0.00	0.07	0.067	O	|	|	|	0.74
64.667	0.00	0.07	0.066	O	|	|	|	0.74
64.750	0.00	0.07	0.066	O	|	|	|	0.73
64.833	0.00	0.07	0.065	O	|	|	|	0.73
64.917	0.00	0.06	0.065	O	|	|	|	0.72
65.000	0.00	0.06	0.064	O	|	|	|	0.72
65.083	0.00	0.06	0.064	O	|	|	|	0.71
65.167	0.00	0.06	0.063	O	|	|	|	0.71
65.250	0.00	0.06	0.063	O	|	|	|	0.70
65.333	0.00	0.06	0.063	O	|	|	|	0.70
65.417	0.00	0.06	0.062	O	|	|	|	0.69
65.500	0.00	0.06	0.062	O	|	|	|	0.69
65.583	0.00	0.06	0.061	O	|	|	|	0.68
65.667	0.00	0.06	0.061	O	|	|	|	0.68
65.750	0.00	0.06	0.060	O	|	|	|	0.67
65.833	0.00	0.06	0.060	O	|	|	|	0.67
65.917	0.00	0.06	0.060	O	|	|	|	0.66
66.000	0.00	0.06	0.059	O	|	|	|	0.66
66.083	0.00	0.06	0.059	O	|	|	|	0.65
66.167	0.00	0.06	0.058	O	|	|	|	0.65
66.250	0.00	0.06	0.058	O	|	|	|	0.64
66.333	0.00	0.06	0.058	O	|	|	|	0.64
66.417	0.00	0.06	0.057	O	|	|	|	0.64
66.500	0.00	0.06	0.057	O	|	|	|	0.63
66.583	0.00	0.06	0.056	O	|	|	|	0.63
66.667	0.00	0.06	0.056	O	|	|	|	0.62
66.750	0.00	0.06	0.056	O	|	|	|	0.62
66.833	0.00	0.06	0.055	O	|	|	|	0.61
66.917	0.00	0.05	0.055	O	|	|	|	0.61
67.000	0.00	0.05	0.055	O	|	|	|	0.61
67.083	0.00	0.05	0.054	O	|	|	|	0.60
67.167	0.00	0.05	0.054	O	|	|	|	0.60
67.250	0.00	0.05	0.053	O	|	|	|	0.59
67.333	0.00	0.05	0.053	O	|	|	|	0.59
67.417	0.00	0.05	0.053	O	|	|	|	0.59
67.500	0.00	0.05	0.052	O	|	|	|	0.58

67.583	0.00	0.05	0.052	O	|	|	|	0.58
67.667	0.00	0.05	0.052	O	|	|	|	0.57
67.750	0.00	0.05	0.051	O	|	|	|	0.57
67.833	0.00	0.05	0.051	O	|	|	|	0.57
67.917	0.00	0.05	0.051	O	|	|	|	0.56
68.000	0.00	0.05	0.050	O	|	|	|	0.56
68.083	0.00	0.05	0.050	O	|	|	|	0.55
68.167	0.00	0.05	0.050	O	|	|	|	0.55
68.250	0.00	0.05	0.049	O	|	|	|	0.55
68.333	0.00	0.05	0.049	O	|	|	|	0.54
68.417	0.00	0.05	0.049	O	|	|	|	0.54
68.500	0.00	0.05	0.048	O	|	|	|	0.54
68.583	0.00	0.05	0.048	O	|	|	|	0.53
68.667	0.00	0.05	0.048	O	|	|	|	0.53
68.750	0.00	0.05	0.047	O	|	|	|	0.52
68.833	0.00	0.05	0.047	O	|	|	|	0.52
68.917	0.00	0.05	0.047	O	|	|	|	0.52
69.000	0.00	0.05	0.046	O	|	|	|	0.51
69.083	0.00	0.05	0.046	O	|	|	|	0.51
69.167	0.00	0.05	0.046	O	|	|	|	0.51
69.250	0.00	0.05	0.045	O	|	|	|	0.50
69.333	0.00	0.04	0.045	O	|	|	|	0.50
69.417	0.00	0.04	0.045	O	|	|	|	0.50
69.500	0.00	0.04	0.044	O	|	|	|	0.49
69.583	0.00	0.04	0.044	O	|	|	|	0.49
69.667	0.00	0.04	0.044	O	|	|	|	0.49
69.750	0.00	0.04	0.043	O	|	|	|	0.48
69.833	0.00	0.04	0.043	O	|	|	|	0.48
69.917	0.00	0.04	0.043	O	|	|	|	0.48
70.000	0.00	0.04	0.043	O	|	|	|	0.47
70.083	0.00	0.04	0.042	O	|	|	|	0.47
70.167	0.00	0.04	0.042	O	|	|	|	0.47
70.250	0.00	0.04	0.042	O	|	|	|	0.46
70.333	0.00	0.04	0.041	O	|	|	|	0.46
70.417	0.00	0.04	0.041	O	|	|	|	0.46
70.500	0.00	0.04	0.041	O	|	|	|	0.45
70.583	0.00	0.04	0.041	O	|	|	|	0.45
70.667	0.00	0.04	0.040	O	|	|	|	0.45
70.750	0.00	0.04	0.040	O	|	|	|	0.44
70.833	0.00	0.04	0.040	O	|	|	|	0.44
70.917	0.00	0.04	0.039	O	|	|	|	0.44
71.000	0.00	0.04	0.039	O	|	|	|	0.44
71.083	0.00	0.04	0.039	O	|	|	|	0.43
71.167	0.00	0.04	0.039	O	|	|	|	0.43
71.250	0.00	0.04	0.038	O	|	|	|	0.43
71.333	0.00	0.04	0.038	O	|	|	|	0.42
71.417	0.00	0.04	0.038	O	|	|	|	0.42
71.500	0.00	0.04	0.038	O	|	|	|	0.42
71.583	0.00	0.04	0.037	O	|	|	|	0.42
71.667	0.00	0.04	0.037	O	|	|	|	0.41
71.750	0.00	0.04	0.037	O	|	|	|	0.41
71.833	0.00	0.04	0.037	O	|	|	|	0.41

71.917	0.00	0.04	0.036	O	|	|	|	0.40
72.000	0.00	0.04	0.036	O	|	|	|	0.40
72.083	0.00	0.04	0.036	O	|	|	|	0.40
72.167	0.00	0.04	0.036	O	|	|	|	0.40
72.250	0.00	0.04	0.035	O	|	|	|	0.39
72.333	0.00	0.04	0.035	O	|	|	|	0.39
72.417	0.00	0.03	0.035	O	|	|	|	0.39
72.500	0.00	0.03	0.035	O	|	|	|	0.38
72.583	0.00	0.03	0.034	O	|	|	|	0.38
72.667	0.00	0.03	0.034	O	|	|	|	0.38
72.750	0.00	0.03	0.034	O	|	|	|	0.38
72.833	0.00	0.03	0.034	O	|	|	|	0.37
72.917	0.00	0.03	0.033	O	|	|	|	0.37
73.000	0.00	0.03	0.033	O	|	|	|	0.37
73.083	0.00	0.03	0.033	O	|	|	|	0.37
73.167	0.00	0.03	0.033	O	|	|	|	0.36
73.250	0.00	0.03	0.033	O	|	|	|	0.36
73.333	0.00	0.03	0.032	O	|	|	|	0.36
73.417	0.00	0.03	0.032	O	|	|	|	0.36
73.500	0.00	0.03	0.032	O	|	|	|	0.35
73.583	0.00	0.03	0.032	O	|	|	|	0.35
73.667	0.00	0.03	0.031	O	|	|	|	0.35
73.750	0.00	0.03	0.031	O	|	|	|	0.35
73.833	0.00	0.03	0.031	O	|	|	|	0.34
73.917	0.00	0.03	0.031	O	|	|	|	0.34
74.000	0.00	0.03	0.031	O	|	|	|	0.34
74.083	0.00	0.03	0.030	O	|	|	|	0.34
74.167	0.00	0.03	0.030	O	|	|	|	0.34
74.250	0.00	0.03	0.030	O	|	|	|	0.33
74.333	0.00	0.03	0.030	O	|	|	|	0.33
74.417	0.00	0.03	0.030	O	|	|	|	0.33
74.500	0.00	0.03	0.029	O	|	|	|	0.33
74.583	0.00	0.03	0.029	O	|	|	|	0.32
74.667	0.00	0.03	0.029	O	|	|	|	0.32
74.750	0.00	0.03	0.029	O	|	|	|	0.32
74.833	0.00	0.03	0.029	O	|	|	|	0.32
74.917	0.00	0.03	0.028	O	|	|	|	0.32
75.000	0.00	0.03	0.028	O	|	|	|	0.31
75.083	0.00	0.03	0.028	O	|	|	|	0.31
75.167	0.00	0.03	0.028	O	|	|	|	0.31
75.250	0.00	0.03	0.028	O	|	|	|	0.31
75.333	0.00	0.03	0.027	O	|	|	|	0.30
75.417	0.00	0.03	0.027	O	|	|	|	0.30
75.500	0.00	0.03	0.027	O	|	|	|	0.30
75.583	0.00	0.03	0.027	O	|	|	|	0.30
75.667	0.00	0.03	0.027	O	|	|	|	0.30
75.750	0.00	0.03	0.026	O	|	|	|	0.29
75.833	0.00	0.03	0.026	O	|	|	|	0.29
75.917	0.00	0.03	0.026	O	|	|	|	0.29
76.000	0.00	0.03	0.026	O	|	|	|	0.29
76.083	0.00	0.03	0.026	O	|	|	|	0.29
76.167	0.00	0.03	0.026	O	|	|	|	0.28

76.250	0.00	0.03	0.025	O	|	|	|	0.28
76.333	0.00	0.03	0.025	O	|	|	|	0.28
76.417	0.00	0.03	0.025	O	|	|	|	0.28
76.500	0.00	0.02	0.025	O	|	|	|	0.28
76.583	0.00	0.02	0.025	O	|	|	|	0.27
76.667	0.00	0.02	0.025	O	|	|	|	0.27
76.750	0.00	0.02	0.024	O	|	|	|	0.27
76.833	0.00	0.02	0.024	O	|	|	|	0.27
76.917	0.00	0.02	0.024	O	|	|	|	0.27
77.000	0.00	0.02	0.024	O	|	|	|	0.27
77.083	0.00	0.02	0.024	O	|	|	|	0.26
77.167	0.00	0.02	0.024	O	|	|	|	0.26
77.250	0.00	0.02	0.023	O	|	|	|	0.26
77.333	0.00	0.02	0.023	O	|	|	|	0.26
77.417	0.00	0.02	0.023	O	|	|	|	0.26
77.500	0.00	0.02	0.023	O	|	|	|	0.25
77.583	0.00	0.02	0.023	O	|	|	|	0.25
77.667	0.00	0.02	0.023	O	|	|	|	0.25
77.750	0.00	0.02	0.022	O	|	|	|	0.25
77.833	0.00	0.02	0.022	O	|	|	|	0.25
77.917	0.00	0.02	0.022	O	|	|	|	0.25
78.000	0.00	0.02	0.022	O	|	|	|	0.24
78.083	0.00	0.02	0.022	O	|	|	|	0.24
78.167	0.00	0.02	0.022	O	|	|	|	0.24
78.250	0.00	0.02	0.022	O	|	|	|	0.24
78.333	0.00	0.02	0.021	O	|	|	|	0.24
78.417	0.00	0.02	0.021	O	|	|	|	0.24
78.500	0.00	0.02	0.021	O	|	|	|	0.23
78.583	0.00	0.02	0.021	O	|	|	|	0.23
78.667	0.00	0.02	0.021	O	|	|	|	0.23
78.750	0.00	0.02	0.021	O	|	|	|	0.23
78.833	0.00	0.02	0.021	O	|	|	|	0.23
78.917	0.00	0.02	0.020	O	|	|	|	0.23
79.000	0.00	0.02	0.020	O	|	|	|	0.22
79.083	0.00	0.02	0.020	O	|	|	|	0.22
79.167	0.00	0.02	0.020	O	|	|	|	0.22
79.250	0.00	0.02	0.020	O	|	|	|	0.22
79.333	0.00	0.02	0.020	O	|	|	|	0.22
79.417	0.00	0.02	0.020	O	|	|	|	0.22
79.500	0.00	0.02	0.019	O	|	|	|	0.22
79.583	0.00	0.02	0.019	O	|	|	|	0.21
79.667	0.00	0.02	0.019	O	|	|	|	0.21
79.750	0.00	0.02	0.019	O	|	|	|	0.21
79.833	0.00	0.02	0.019	O	|	|	|	0.21
79.917	0.00	0.02	0.019	O	|	|	|	0.21
80.000	0.00	0.02	0.019	O	|	|	|	0.21
80.083	0.00	0.02	0.019	O	|	|	|	0.21
80.167	0.00	0.02	0.018	O	|	|	|	0.20
80.250	0.00	0.02	0.018	O	|	|	|	0.20
80.333	0.00	0.02	0.018	O	|	|	|	0.20
80.417	0.00	0.02	0.018	O	|	|	|	0.20
80.500	0.00	0.02	0.018	O	|	|	|	0.20

80.583	0.00	0.02	0.018	O	|	|	|	0.20
80.667	0.00	0.02	0.018	O	|	|	|	0.20
80.750	0.00	0.02	0.018	O	|	|	|	0.19
80.833	0.00	0.02	0.017	O	|	|	|	0.19
80.917	0.00	0.02	0.017	O	|	|	|	0.19
81.000	0.00	0.02	0.017	O	|	|	|	0.19
81.083	0.00	0.02	0.017	O	|	|	|	0.19
81.167	0.00	0.02	0.017	O	|	|	|	0.19
81.250	0.00	0.02	0.017	O	|	|	|	0.19
81.333	0.00	0.02	0.017	O	|	|	|	0.19
81.417	0.00	0.02	0.017	O	|	|	|	0.18
81.500	0.00	0.02	0.016	O	|	|	|	0.18
81.583	0.00	0.02	0.016	O	|	|	|	0.18
81.667	0.00	0.02	0.016	O	|	|	|	0.18
81.750	0.00	0.02	0.016	O	|	|	|	0.18
81.833	0.00	0.02	0.016	O	|	|	|	0.18
81.917	0.00	0.02	0.016	O	|	|	|	0.18
82.000	0.00	0.02	0.016	O	|	|	|	0.18
82.083	0.00	0.02	0.016	O	|	|	|	0.17
82.167	0.00	0.02	0.016	O	|	|	|	0.17
82.250	0.00	0.02	0.015	O	|	|	|	0.17
82.333	0.00	0.02	0.015	O	|	|	|	0.17
82.417	0.00	0.02	0.015	O	|	|	|	0.17
82.500	0.00	0.02	0.015	O	|	|	|	0.17
82.583	0.00	0.02	0.015	O	|	|	|	0.17
82.667	0.00	0.01	0.015	O	|	|	|	0.17
82.750	0.00	0.01	0.015	O	|	|	|	0.16
82.833	0.00	0.01	0.015	O	|	|	|	0.16
82.917	0.00	0.01	0.015	O	|	|	|	0.16
83.000	0.00	0.01	0.015	O	|	|	|	0.16
83.083	0.00	0.01	0.014	O	|	|	|	0.16
83.167	0.00	0.01	0.014	O	|	|	|	0.16
83.250	0.00	0.01	0.014	O	|	|	|	0.16
83.333	0.00	0.01	0.014	O	|	|	|	0.16
83.417	0.00	0.01	0.014	O	|	|	|	0.16
83.500	0.00	0.01	0.014	O	|	|	|	0.16
83.583	0.00	0.01	0.014	O	|	|	|	0.15
83.667	0.00	0.01	0.014	O	|	|	|	0.15
83.750	0.00	0.01	0.014	O	|	|	|	0.15
83.833	0.00	0.01	0.014	O	|	|	|	0.15
83.917	0.00	0.01	0.013	O	|	|	|	0.15
84.000	0.00	0.01	0.013	O	|	|	|	0.15
84.083	0.00	0.01	0.013	O	|	|	|	0.15
84.167	0.00	0.01	0.013	O	|	|	|	0.15
84.250	0.00	0.01	0.013	O	|	|	|	0.15
84.333	0.00	0.01	0.013	O	|	|	|	0.14
84.417	0.00	0.01	0.013	O	|	|	|	0.14
84.500	0.00	0.01	0.013	O	|	|	|	0.14
84.583	0.00	0.01	0.013	O	|	|	|	0.14
84.667	0.00	0.01	0.013	O	|	|	|	0.14
84.750	0.00	0.01	0.013	O	|	|	|	0.14
84.833	0.00	0.01	0.012	O	|	|	|	0.14

84.917	0.00	0.01	0.012	O	|	|	|	0.14
85.000	0.00	0.01	0.012	O	|	|	|	0.14
85.083	0.00	0.01	0.012	O	|	|	|	0.14
85.167	0.00	0.01	0.012	O	|	|	|	0.14
85.250	0.00	0.01	0.012	O	|	|	|	0.13
85.333	0.00	0.01	0.012	O	|	|	|	0.13
85.417	0.00	0.01	0.012	O	|	|	|	0.13
85.500	0.00	0.01	0.012	O	|	|	|	0.13
85.583	0.00	0.01	0.012	O	|	|	|	0.13
85.667	0.00	0.01	0.012	O	|	|	|	0.13
85.750	0.00	0.01	0.012	O	|	|	|	0.13
85.833	0.00	0.01	0.012	O	|	|	|	0.13
85.917	0.00	0.01	0.011	O	|	|	|	0.13
86.000	0.00	0.01	0.011	O	|	|	|	0.13
86.083	0.00	0.01	0.011	O	|	|	|	0.13
86.167	0.00	0.01	0.011	O	|	|	|	0.12
86.250	0.00	0.01	0.011	O	|	|	|	0.12
86.333	0.00	0.01	0.011	O	|	|	|	0.12
86.417	0.00	0.01	0.011	O	|	|	|	0.12
86.500	0.00	0.01	0.011	O	|	|	|	0.12
86.583	0.00	0.01	0.011	O	|	|	|	0.12
86.667	0.00	0.01	0.011	O	|	|	|	0.12
86.750	0.00	0.01	0.011	O	|	|	|	0.12
86.833	0.00	0.01	0.011	O	|	|	|	0.12
86.917	0.00	0.01	0.011	O	|	|	|	0.12
87.000	0.00	0.01	0.010	O	|	|	|	0.12
87.083	0.00	0.01	0.010	O	|	|	|	0.12
87.167	0.00	0.01	0.010	O	|	|	|	0.11
87.250	0.00	0.01	0.010	O	|	|	|	0.11
87.333	0.00	0.01	0.010	O	|	|	|	0.11
87.417	0.00	0.01	0.010	O	|	|	|	0.11
87.500	0.00	0.01	0.010	O	|	|	|	0.11
87.583	0.00	0.01	0.010	O	|	|	|	0.11
87.667	0.00	0.01	0.010	O	|	|	|	0.11
87.750	0.00	0.01	0.010	O	|	|	|	0.11
87.833	0.00	0.01	0.010	O	|	|	|	0.11
87.917	0.00	0.01	0.010	O	|	|	|	0.11
88.000	0.00	0.01	0.010	O	|	|	|	0.11
88.083	0.00	0.01	0.010	O	|	|	|	0.11
88.167	0.00	0.01	0.009	O	|	|	|	0.11
88.250	0.00	0.01	0.009	O	|	|	|	0.10
88.333	0.00	0.01	0.009	O	|	|	|	0.10
88.417	0.00	0.01	0.009	O	|	|	|	0.10
88.500	0.00	0.01	0.009	O	|	|	|	0.10
88.583	0.00	0.01	0.009	O	|	|	|	0.10
88.667	0.00	0.01	0.009	O	|	|	|	0.10
88.750	0.00	0.01	0.009	O	|	|	|	0.10
88.833	0.00	0.01	0.009	O	|	|	|	0.10
88.917	0.00	0.01	0.009	O	|	|	|	0.10
89.000	0.00	0.01	0.009	O	|	|	|	0.10
89.083	0.00	0.01	0.009	O	|	|	|	0.10
89.167	0.00	0.01	0.009	O	|	|	|	0.10

89.250	0.00	0.01	0.009	O	|	|	|	0.10
89.333	0.00	0.01	0.009	O	|	|	|	0.10
89.417	0.00	0.01	0.009	O	|	|	|	0.10
89.500	0.00	0.01	0.008	O	|	|	|	0.09
89.583	0.00	0.01	0.008	O	|	|	|	0.09
89.667	0.00	0.01	0.008	O	|	|	|	0.09
89.750	0.00	0.01	0.008	O	|	|	|	0.09
89.833	0.00	0.01	0.008	O	|	|	|	0.09
89.917	0.00	0.01	0.008	O	|	|	|	0.09
90.000	0.00	0.01	0.008	O	|	|	|	0.09
90.083	0.00	0.01	0.008	O	|	|	|	0.09
90.167	0.00	0.01	0.008	O	|	|	|	0.09
90.250	0.00	0.01	0.008	O	|	|	|	0.09
90.333	0.00	0.01	0.008	O	|	|	|	0.09
90.417	0.00	0.01	0.008	O	|	|	|	0.09
90.500	0.00	0.01	0.008	O	|	|	|	0.09
90.583	0.00	0.01	0.008	O	|	|	|	0.09
90.667	0.00	0.01	0.008	O	|	|	|	0.09
90.750	0.00	0.01	0.008	O	|	|	|	0.09
90.833	0.00	0.01	0.008	O	|	|	|	0.08
90.917	0.00	0.01	0.008	O	|	|	|	0.08
91.000	0.00	0.01	0.008	O	|	|	|	0.08
91.083	0.00	0.01	0.007	O	|	|	|	0.08
91.167	0.00	0.01	0.007	O	|	|	|	0.08
91.250	0.00	0.01	0.007	O	|	|	|	0.08
91.333	0.00	0.01	0.007	O	|	|	|	0.08
91.417	0.00	0.01	0.007	O	|	|	|	0.08
91.500	0.00	0.01	0.007	O	|	|	|	0.08
91.583	0.00	0.01	0.007	O	|	|	|	0.08
91.667	0.00	0.01	0.007	O	|	|	|	0.08
91.750	0.00	0.01	0.007	O	|	|	|	0.08
91.833	0.00	0.01	0.007	O	|	|	|	0.08
91.917	0.00	0.01	0.007	O	|	|	|	0.08
92.000	0.00	0.01	0.007	O	|	|	|	0.08
92.083	0.00	0.01	0.007	O	|	|	|	0.08
92.167	0.00	0.01	0.007	O	|	|	|	0.08
92.250	0.00	0.01	0.007	O	|	|	|	0.08
92.333	0.00	0.01	0.007	O	|	|	|	0.07
92.417	0.00	0.01	0.007	O	|	|	|	0.07
92.500	0.00	0.01	0.007	O	|	|	|	0.07
92.583	0.00	0.01	0.007	O	|	|	|	0.07
92.667	0.00	0.01	0.007	O	|	|	|	0.07
92.750	0.00	0.01	0.006	O	|	|	|	0.07
92.833	0.00	0.01	0.006	O	|	|	|	0.07
92.917	0.00	0.01	0.006	O	|	|	|	0.07
93.000	0.00	0.01	0.006	O	|	|	|	0.07
93.083	0.00	0.01	0.006	O	|	|	|	0.07
93.167	0.00	0.01	0.006	O	|	|	|	0.07
93.250	0.00	0.01	0.006	O	|	|	|	0.07
93.333	0.00	0.01	0.006	O	|	|	|	0.07
93.417	0.00	0.01	0.006	O	|	|	|	0.07
93.500	0.00	0.01	0.006	O	|	|	|	0.07

93.583	0.00	0.01	0.006	O	|	|	|	0.07
93.667	0.00	0.01	0.006	O	|	|	|	0.07
93.750	0.00	0.01	0.006	O	|	|	|	0.07
93.833	0.00	0.01	0.006	O	|	|	|	0.07
93.917	0.00	0.01	0.006	O	|	|	|	0.07
94.000	0.00	0.01	0.006	O	|	|	|	0.07
94.083	0.00	0.01	0.006	O	|	|	|	0.06
94.167	0.00	0.01	0.006	O	|	|	|	0.06
94.250	0.00	0.01	0.006	O	|	|	|	0.06
94.333	0.00	0.01	0.006	O	|	|	|	0.06
94.417	0.00	0.01	0.006	O	|	|	|	0.06
94.500	0.00	0.01	0.006	O	|	|	|	0.06
94.583	0.00	0.01	0.006	O	|	|	|	0.06
94.667	0.00	0.01	0.006	O	|	|	|	0.06
94.750	0.00	0.01	0.006	O	|	|	|	0.06
94.833	0.00	0.01	0.005	O	|	|	|	0.06
94.917	0.00	0.01	0.005	O	|	|	|	0.06
95.000	0.00	0.01	0.005	O	|	|	|	0.06
95.083	0.00	0.01	0.005	O	|	|	|	0.06
95.167	0.00	0.01	0.005	O	|	|	|	0.06
95.250	0.00	0.01	0.005	O	|	|	|	0.06
95.333	0.00	0.01	0.005	O	|	|	|	0.06
95.417	0.00	0.01	0.005	O	|	|	|	0.06
95.500	0.00	0.01	0.005	O	|	|	|	0.06
95.583	0.00	0.01	0.005	O	|	|	|	0.06
95.667	0.00	0.01	0.005	O	|	|	|	0.06
95.750	0.00	0.01	0.005	O	|	|	|	0.06
95.833	0.00	0.01	0.005	O	|	|	|	0.06
95.917	0.00	0.00	0.005	O	|	|	|	0.06
96.000	0.00	0.00	0.005	O	|	|	|	0.06
96.083	0.00	0.00	0.005	O	|	|	|	0.05
96.167	0.00	0.00	0.005	O	|	|	|	0.05
96.250	0.00	0.00	0.005	O	|	|	|	0.05
96.333	0.00	0.00	0.005	O	|	|	|	0.05
96.417	0.00	0.00	0.005	O	|	|	|	0.05
96.500	0.00	0.00	0.005	O	|	|	|	0.05
96.583	0.00	0.00	0.005	O	|	|	|	0.05
96.667	0.00	0.00	0.005	O	|	|	|	0.05
96.750	0.00	0.00	0.005	O	|	|	|	0.05
96.833	0.00	0.00	0.005	O	|	|	|	0.05
96.917	0.00	0.00	0.005	O	|	|	|	0.05
97.000	0.00	0.00	0.005	O	|	|	|	0.05
97.083	0.00	0.00	0.005	O	|	|	|	0.05
97.167	0.00	0.00	0.005	O	|	|	|	0.05
97.250	0.00	0.00	0.004	O	|	|	|	0.05
97.333	0.00	0.00	0.004	O	|	|	|	0.05
97.417	0.00	0.00	0.004	O	|	|	|	0.05
97.500	0.00	0.00	0.004	O	|	|	|	0.05
97.583	0.00	0.00	0.004	O	|	|	|	0.05
97.667	0.00	0.00	0.004	O	|	|	|	0.05
97.750	0.00	0.00	0.004	O	|	|	|	0.05
97.833	0.00	0.00	0.004	O	|	|	|	0.05

97.917	0.00	0.00	0.004	O	|	|	|	0.05
98.000	0.00	0.00	0.004	O	|	|	|	0.05
98.083	0.00	0.00	0.004	O	|	|	|	0.05
98.167	0.00	0.00	0.004	O	|	|	|	0.05
98.250	0.00	0.00	0.004	O	|	|	|	0.05
98.333	0.00	0.00	0.004	O	|	|	|	0.05
98.417	0.00	0.00	0.004	O	|	|	|	0.05
98.500	0.00	0.00	0.004	O	|	|	|	0.04
98.583	0.00	0.00	0.004	O	|	|	|	0.04
98.667	0.00	0.00	0.004	O	|	|	|	0.04
98.750	0.00	0.00	0.004	O	|	|	|	0.04
98.833	0.00	0.00	0.004	O	|	|	|	0.04
98.917	0.00	0.00	0.004	O	|	|	|	0.04
99.000	0.00	0.00	0.004	O	|	|	|	0.04
99.083	0.00	0.00	0.004	O	|	|	|	0.04
99.167	0.00	0.00	0.004	O	|	|	|	0.04
99.250	0.00	0.00	0.004	O	|	|	|	0.04
99.333	0.00	0.00	0.004	O	|	|	|	0.04
99.417	0.00	0.00	0.004	O	|	|	|	0.04
99.500	0.00	0.00	0.004	O	|	|	|	0.04
99.583	0.00	0.00	0.004	O	|	|	|	0.04
99.667	0.00	0.00	0.004	O	|	|	|	0.04
99.750	0.00	0.00	0.004	O	|	|	|	0.04
99.833	0.00	0.00	0.004	O	|	|	|	0.04
99.917	0.00	0.00	0.004	O	|	|	|	0.04
100.000	0.00	0.00	0.004	O	|	|	|	0.04
100.083	0.00	0.00	0.004	O	|	|	|	0.04
100.167	0.00	0.00	0.004	O	|	|	|	0.04
100.250	0.00	0.00	0.003	O	|	|	|	0.04
100.333	0.00	0.00	0.003	O	|	|	|	0.04
100.417	0.00	0.00	0.003	O	|	|	|	0.04
100.500	0.00	0.00	0.003	O	|	|	|	0.04
100.583	0.00	0.00	0.003	O	|	|	|	0.04
100.667	0.00	0.00	0.003	O	|	|	|	0.04
100.750	0.00	0.00	0.003	O	|	|	|	0.04
100.833	0.00	0.00	0.003	O	|	|	|	0.04
100.917	0.00	0.00	0.003	O	|	|	|	0.04
101.000	0.00	0.00	0.003	O	|	|	|	0.04
101.083	0.00	0.00	0.003	O	|	|	|	0.04
101.167	0.00	0.00	0.003	O	|	|	|	0.04
101.250	0.00	0.00	0.003	O	|	|	|	0.04
101.333	0.00	0.00	0.003	O	|	|	|	0.04
101.417	0.00	0.00	0.003	O	|	|	|	0.04
101.500	0.00	0.00	0.003	O	|	|	|	0.04
101.583	0.00	0.00	0.003	O	|	|	|	0.03
101.667	0.00	0.00	0.003	O	|	|	|	0.03
101.750	0.00	0.00	0.003	O	|	|	|	0.03
101.833	0.00	0.00	0.003	O	|	|	|	0.03
101.917	0.00	0.00	0.003	O	|	|	|	0.03
102.000	0.00	0.00	0.003	O	|	|	|	0.03
102.083	0.00	0.00	0.003	O	|	|	|	0.03
102.167	0.00	0.00	0.003	O	|	|	|	0.03

102.250	0.00	0.00	0.003	O	|	|	|	0.03
102.333	0.00	0.00	0.003	O	|	|	|	0.03
102.417	0.00	0.00	0.003	O	|	|	|	0.03
102.500	0.00	0.00	0.003	O	|	|	|	0.03
102.583	0.00	0.00	0.003	O	|	|	|	0.03
102.667	0.00	0.00	0.003	O	|	|	|	0.03
102.750	0.00	0.00	0.003	O	|	|	|	0.03
102.833	0.00	0.00	0.003	O	|	|	|	0.03
102.917	0.00	0.00	0.003	O	|	|	|	0.03
103.000	0.00	0.00	0.003	O	|	|	|	0.03
103.083	0.00	0.00	0.003	O	|	|	|	0.03
103.167	0.00	0.00	0.003	O	|	|	|	0.03
103.250	0.00	0.00	0.003	O	|	|	|	0.03
103.333	0.00	0.00	0.003	O	|	|	|	0.03
103.417	0.00	0.00	0.003	O	|	|	|	0.03
103.500	0.00	0.00	0.003	O	|	|	|	0.03
103.583	0.00	0.00	0.003	O	|	|	|	0.03
103.667	0.00	0.00	0.003	O	|	|	|	0.03
103.750	0.00	0.00	0.003	O	|	|	|	0.03
103.833	0.00	0.00	0.003	O	|	|	|	0.03
103.917	0.00	0.00	0.003	O	|	|	|	0.03
104.000	0.00	0.00	0.003	O	|	|	|	0.03
104.083	0.00	0.00	0.003	O	|	|	|	0.03
104.167	0.00	0.00	0.003	O	|	|	|	0.03
104.250	0.00	0.00	0.003	O	|	|	|	0.03
104.333	0.00	0.00	0.002	O	|	|	|	0.03
104.417	0.00	0.00	0.002	O	|	|	|	0.03
104.500	0.00	0.00	0.002	O	|	|	|	0.03
104.583	0.00	0.00	0.002	O	|	|	|	0.03
104.667	0.00	0.00	0.002	O	|	|	|	0.03
104.750	0.00	0.00	0.002	O	|	|	|	0.03
104.833	0.00	0.00	0.002	O	|	|	|	0.03
104.917	0.00	0.00	0.002	O	|	|	|	0.03
105.000	0.00	0.00	0.002	O	|	|	|	0.03
105.083	0.00	0.00	0.002	O	|	|	|	0.03
105.167	0.00	0.00	0.002	O	|	|	|	0.03
105.250	0.00	0.00	0.002	O	|	|	|	0.03
105.333	0.00	0.00	0.002	O	|	|	|	0.03
105.417	0.00	0.00	0.002	O	|	|	|	0.03
105.500	0.00	0.00	0.002	O	|	|	|	0.03
105.583	0.00	0.00	0.002	O	|	|	|	0.02
105.667	0.00	0.00	0.002	O	|	|	|	0.02
105.750	0.00	0.00	0.002	O	|	|	|	0.02
105.833	0.00	0.00	0.002	O	|	|	|	0.02
105.917	0.00	0.00	0.002	O	|	|	|	0.02
106.000	0.00	0.00	0.002	O	|	|	|	0.02
106.083	0.00	0.00	0.002	O	|	|	|	0.02
106.167	0.00	0.00	0.002	O	|	|	|	0.02
106.250	0.00	0.00	0.002	O	|	|	|	0.02
106.333	0.00	0.00	0.002	O	|	|	|	0.02
106.417	0.00	0.00	0.002	O	|	|	|	0.02
106.500	0.00	0.00	0.002	O	|	|	|	0.02

106.583	0.00	0.00	0.002	O	|	|	|	|	0.02
106.667	0.00	0.00	0.002	O	|	|	|	|	0.02
106.750	0.00	0.00	0.002	O	|	|	|	|	0.02
106.833	0.00	0.00	0.002	O	|	|	|	|	0.02
106.917	0.00	0.00	0.002	O	|	|	|	|	0.02
107.000	0.00	0.00	0.002	O	|	|	|	|	0.02
107.083	0.00	0.00	0.002	O	|	|	|	|	0.02
107.167	0.00	0.00	0.002	O	|	|	|	|	0.02
107.250	0.00	0.00	0.002	O	|	|	|	|	0.02
107.333	0.00	0.00	0.002	O	|	|	|	|	0.02
107.417	0.00	0.00	0.002	O	|	|	|	|	0.02
107.500	0.00	0.00	0.002	O	|	|	|	|	0.02
107.583	0.00	0.00	0.002	O	|	|	|	|	0.02
107.667	0.00	0.00	0.002	O	|	|	|	|	0.02
107.750	0.00	0.00	0.002	O	|	|	|	|	0.02
107.833	0.00	0.00	0.002	O	|	|	|	|	0.02
107.917	0.00	0.00	0.002	O	|	|	|	|	0.02
108.000	0.00	0.00	0.002	O	|	|	|	|	0.02
108.083	0.00	0.00	0.002	O	|	|	|	|	0.02
108.167	0.00	0.00	0.002	O	|	|	|	|	0.02
108.250	0.00	0.00	0.002	O	|	|	|	|	0.02
108.333	0.00	0.00	0.002	O	|	|	|	|	0.02
108.417	0.00	0.00	0.002	O	|	|	|	|	0.02
108.500	0.00	0.00	0.002	O	|	|	|	|	0.02
108.583	0.00	0.00	0.002	O	|	|	|	|	0.02
108.667	0.00	0.00	0.002	O	|	|	|	|	0.02
108.750	0.00	0.00	0.002	O	|	|	|	|	0.02
108.833	0.00	0.00	0.002	O	|	|	|	|	0.02
108.917	0.00	0.00	0.002	O	|	|	|	|	0.02
109.000	0.00	0.00	0.002	O	|	|	|	|	0.02
109.083	0.00	0.00	0.002	O	|	|	|	|	0.02
109.167	0.00	0.00	0.002	O	|	|	|	|	0.02
109.250	0.00	0.00	0.002	O	|	|	|	|	0.02
109.333	0.00	0.00	0.002	O	|	|	|	|	0.02
109.417	0.00	0.00	0.002	O	|	|	|	|	0.02
109.500	0.00	0.00	0.002	O	|	|	|	|	0.02
109.583	0.00	0.00	0.002	O	|	|	|	|	0.02
109.667	0.00	0.00	0.002	O	|	|	|	|	0.02
109.750	0.00	0.00	0.002	O	|	|	|	|	0.02
109.833	0.00	0.00	0.002	O	|	|	|	|	0.02
109.917	0.00	0.00	0.002	O	|	|	|	|	0.02
110.000	0.00	0.00	0.002	O	|	|	|	|	0.02
110.083	0.00	0.00	0.002	O	|	|	|	|	0.02
110.167	0.00	0.00	0.002	O	|	|	|	|	0.02
110.250	0.00	0.00	0.002	O	|	|	|	|	0.02
110.333	0.00	0.00	0.002	O	|	|	|	|	0.02
110.417	0.00	0.00	0.002	O	|	|	|	|	0.02
110.500	0.00	0.00	0.001	O	|	|	|	|	0.02
110.583	0.00	0.00	0.001	O	|	|	|	|	0.02
110.667	0.00	0.00	0.001	O	|	|	|	|	0.02
110.750	0.00	0.00	0.001	O	|	|	|	|	0.02
110.833	0.00	0.00	0.001	O	|	|	|	|	0.02

110.917	0.00	0.00	0.001	O	|	|	|	0.02
111.000	0.00	0.00	0.001	O	|	|	|	0.02
111.083	0.00	0.00	0.001	O	|	|	|	0.02
111.167	0.00	0.00	0.001	O	|	|	|	0.02
111.250	0.00	0.00	0.001	O	|	|	|	0.02
111.333	0.00	0.00	0.001	O	|	|	|	0.02
111.417	0.00	0.00	0.001	O	|	|	|	0.02
111.500	0.00	0.00	0.001	O	|	|	|	0.02
111.583	0.00	0.00	0.001	O	|	|	|	0.02
111.667	0.00	0.00	0.001	O	|	|	|	0.02
111.750	0.00	0.00	0.001	O	|	|	|	0.02
111.833	0.00	0.00	0.001	O	|	|	|	0.01
111.917	0.00	0.00	0.001	O	|	|	|	0.01
112.000	0.00	0.00	0.001	O	|	|	|	0.01
112.083	0.00	0.00	0.001	O	|	|	|	0.01
112.167	0.00	0.00	0.001	O	|	|	|	0.01
112.250	0.00	0.00	0.001	O	|	|	|	0.01
112.333	0.00	0.00	0.001	O	|	|	|	0.01
112.417	0.00	0.00	0.001	O	|	|	|	0.01
112.500	0.00	0.00	0.001	O	|	|	|	0.01
112.583	0.00	0.00	0.001	O	|	|	|	0.01
112.667	0.00	0.00	0.001	O	|	|	|	0.01
112.750	0.00	0.00	0.001	O	|	|	|	0.01
112.833	0.00	0.00	0.001	O	|	|	|	0.01
112.917	0.00	0.00	0.001	O	|	|	|	0.01
113.000	0.00	0.00	0.001	O	|	|	|	0.01
113.083	0.00	0.00	0.001	O	|	|	|	0.01
113.167	0.00	0.00	0.001	O	|	|	|	0.01
113.250	0.00	0.00	0.001	O	|	|	|	0.01
113.333	0.00	0.00	0.001	O	|	|	|	0.01
113.417	0.00	0.00	0.001	O	|	|	|	0.01
113.500	0.00	0.00	0.001	O	|	|	|	0.01
113.583	0.00	0.00	0.001	O	|	|	|	0.01
113.667	0.00	0.00	0.001	O	|	|	|	0.01
113.750	0.00	0.00	0.001	O	|	|	|	0.01
113.833	0.00	0.00	0.001	O	|	|	|	0.01
113.917	0.00	0.00	0.001	O	|	|	|	0.01
114.000	0.00	0.00	0.001	O	|	|	|	0.01
114.083	0.00	0.00	0.001	O	|	|	|	0.01
114.167	0.00	0.00	0.001	O	|	|	|	0.01
114.250	0.00	0.00	0.001	O	|	|	|	0.01
114.333	0.00	0.00	0.001	O	|	|	|	0.01
114.417	0.00	0.00	0.001	O	|	|	|	0.01
114.500	0.00	0.00	0.001	O	|	|	|	0.01
114.583	0.00	0.00	0.001	O	|	|	|	0.01
114.667	0.00	0.00	0.001	O	|	|	|	0.01
114.750	0.00	0.00	0.001	O	|	|	|	0.01
114.833	0.00	0.00	0.001	O	|	|	|	0.01
114.917	0.00	0.00	0.001	O	|	|	|	0.01
115.000	0.00	0.00	0.001	O	|	|	|	0.01
115.083	0.00	0.00	0.001	O	|	|	|	0.01
115.167	0.00	0.00	0.001	O	|	|	|	0.01

```
115.250    0.00    0.00      0.001  O       |       |       |       |     0.01
115.333    0.00    0.00      0.001  O       |       |       |       |     0.01
115.417    0.00    0.00      0.001  O       |       |       |       |     0.01

        ****************************HYDROGRAPH DATA****************************
                        Number of intervals =  1385
                        Time interval =    5.0 (Min.)
                        Maximum/Peak flow rate =        8.123 (CFS)
                        Total volume =       5.105 (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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D.2 – BASIN "B" STAGE-STORAGE-OUTFLOW SUMMARY & BASIN ROUTING ANALYSIS

PROJECT: 2023.06022 Tr. 31513 "Tres Cerritos"

Extended Detention "Basin B"

Input	Basin Depth (ft)	Total Vol. (af)	*WQ Orifice Q (cfs)	Pump outflow (cfs)	Weir 1 Outflow (cfs)	Weir 2 - Emergancy Overflow (cfs)	Total Q out (cfs)	Contour Elevation	Contour Area (sf)	Inc. Volume (cf)	Inc. Volume (af)
1	**0.00**	**0**	0.00				0.00	**1496.00**	**2,857**		
	0.33	0.02	0.05				0.05	1496.33	3,489	1,045	0.02
	0.67	0.05	0.08				0.08	1496.67	4,139	1,295	0.03
	1.00	**0.09**	0.09				**0.09**	**1497.00**	**4,771**	1,469	0.03
	1.33	0.13	0.11				0.11	1497.33	7,846	2,061	0.05
	1.67	0.21	0.12				0.12	1497.67	11,014	3,191	0.07
	2.00	**0.30**	0.13				**0.13**	**1498.00**	**14,089**	4,132	0.09
	2.33	0.41	0.14				0.14	1498.33	14,681	4,747	0.11
2	**2.55**	**0.49**		0.5			**0.5**	**1498.55**	15,076	3,273	0.08
	2.67	0.53		0.0			0.0	1498.67	15,291	1,822	0.04
3	**3.00**	**0.65**		0.0			**0.0**	1499.00	**15,883**	5,143	0.12
4	**4.00**	**1.03**		0.0			**0.0**	**1500.00**	**17,749**	16,807	0.39
5	**5.00**	**1.46**		0.0			**0.0**	**1501.00**	**19,621**	18,677	0.43
6	**6.00**	**1.93**		0.0			**0.0**	**1502.00**	**21,538**	20,572	0.47
7	**7.00**	**2.45**		0.0			**0.0**	**1503.00**	**23,549**	22,536	0.52
8	**7.50**	**2.73**		0.0	0.00		**0.0**	**1503.50**	**24,605**	12,037	0.28
9	**8.00**	**3.02**		0.0	24.7		**24.7**	**1504.00**	**25,660**	12,565	0.29
	8.25	3.17		0.0	45.4	0.00	45.4	1504.25	26,374	6,504	0.15
	8.50	3.32		0.0	69.9	0.00	69.9	1504.50	27,110	6,685	0.15
10	**9.00**	**3.63**		0.0	128.5	0.00	**128.5**	1505.00	**27,824**	13,733	0.32

DCV:	21,253	CF
	0.49	AC-FT

	ac-ft		depth	
X1	0.303	Y1	2.00	
X2	0.49	Y2	2.54	1498.54
X3	0.647	Y3	3.00	

Pump Outflow		
*Total basin dewatering within 72 hrs	118,808	cu-ft
	888,804	gal
	206	gpm
	0.46	cfs
*50% DCV basin dewatering within 24hrs	10,606	cu-ft
	79,347	gal
	55	gpm
	0.12	cfs

Orifice Outflow		
Q=Ca(2gh)^(1/2)		
Orifice ID	No. 1	No. 2
d (in)=	1.8	
C=	0.66	0.66
a (ft^2)=	0.018	0.000
FL INV.=	1496.0	

Weir Outflow		
Q=(Cw)(L)(H)^(3/2)		
Weir ID	No. 1	No. 2
Weir Length, L (ft)=	21	
Cw=	3.33	3.33
FL INV.=	1503.5	1503.5

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name: SP2 & Co,. Date: 7/14/2025

Designed by: Alex Jaramillo Case No: TBD

Company Project Number/Name: 2023.06022 Tract 31513 "Tres Cerritos"

BMP Identification

BMP NAME / ID: Extended Detention "Basin B"

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.69 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
B: Imp. Streets & Sidewalks	*178034*	*Concrete or Asphalt*	*1*	*0.89*	*158806.3*			
B: Imp. 3600 SFR (62%)	*67508.08*	*Roofs*	*1*	*0.89*	*60217.2*			
B: Pervious 3600 SFR (38%)	*41375.92*	*Ornamental Landscaping*	*0.1*	*0.11*	*4570.3*			
B: Imp. 6000 SFR (57%)	*137745.06*	*Roofs*	*1*	*0.89*	*122868.6*			
B: Pervious 6000 SFR (43%)	*103912.94*	*Ornamental Landscaping*	*0.1*	*0.11*	*11478*			
B: Pervious Landscaping	*63582*	*Ornamental Landscaping*	*0.1*	*0.11*	*7023.1*			
B: BMP Basin	*42052*	*Ornamental Landscaping*	*0.1*	*0.11*	*4645*			
	634210	***Total***			**369608.5**	**0.69**	***21252.5***	***158296***

Notes:

Extended Detention Basin Design Procedure	BMP Subarea No. DMA B	Legend:	Required Entries / Calculated Cells

Company Name:	SP2 & Co.	Date:	7/15/2025
Designed by:	A. Jaramillo	County/City Case No.:	TBD

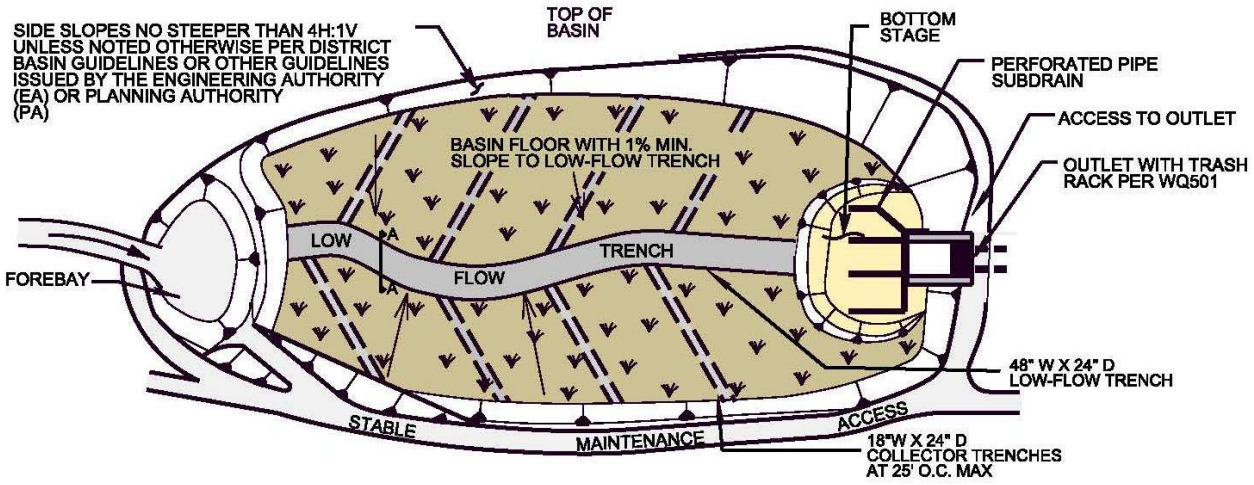
Design Volume

Tributary Area (BMP Subarea)	A_T =	14.56	acres
Enter V_{BMP}, determined from Section 2.1 of this Handbook	V_{BMP}=	21,253	ft^3

Basin Footprint

Overall Geometry

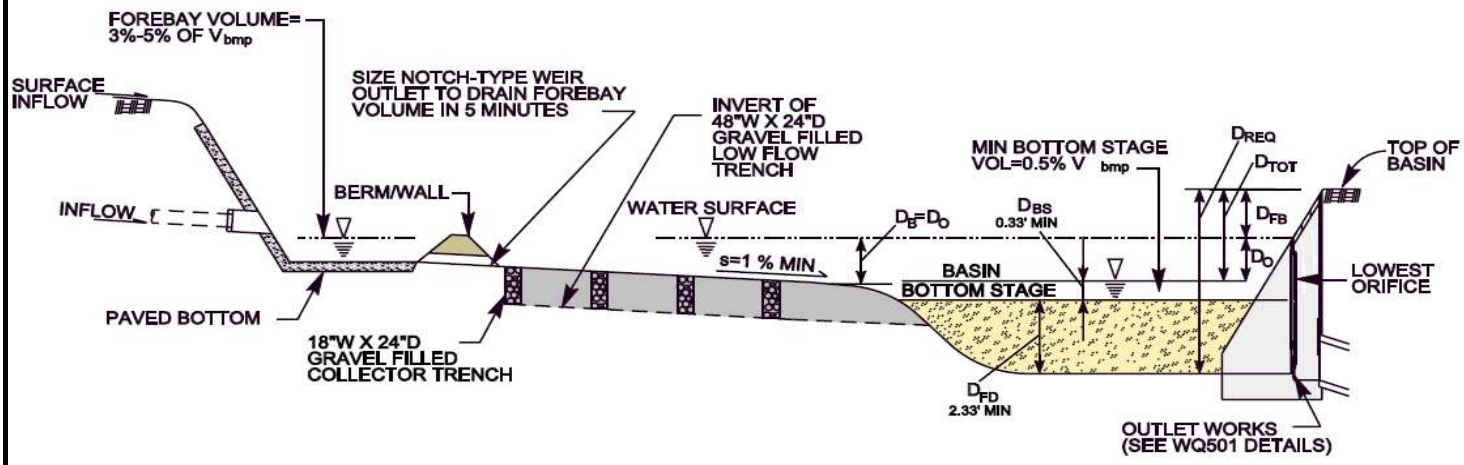
Length at Basin Bottom Surface	Length =	228	ft
Width at Basin Bottom Surface	Width =	68	ft
	Meets 1.5 : 1 requirement?	✓	
Side Slopes per "Basin Guidelines", Sect. 1.2	z =	4	:1
Proposed Basin Depth (with no freeboard)	D_B =	4.00	ft
Depth of freeboard (if used)	D_{FB} =	1.00	ft
Minimum Required Allowance for Total Depth (including proposed basin depth, freeboard, minimum depth of bottom stage (D_{BS}=0.33') and minimum filter depth (D_{FD}=2.33'))	D_{REQ} =	7.7	ft
Depth from design water surface elevation to lowest orifice	D_O =	4.0	ft



Basin Design

Basin Design

Proposed Total Basin Depth (proposed depth plus freeboard)	D_{TOT} =	5.00	ft
Basin Invert Longitudinal Slope	Slope =	1.00	%
Basin Invert Transverse Slope (1% min)	Slope =	1	%
Basin Volume	V_{Basin} =	154185	ft^3



Forebay Design

Forebay Volume (3 - 5% V_{BMP})	V_{FB} =	850	ft^3
Forebay Depth (height of berm)	D_{FBY} =	1	ft
Minimum Forebay Surface Area	A_{FB} =	850	ft^2
Rectangular weir (notch)	W =	8.00	in

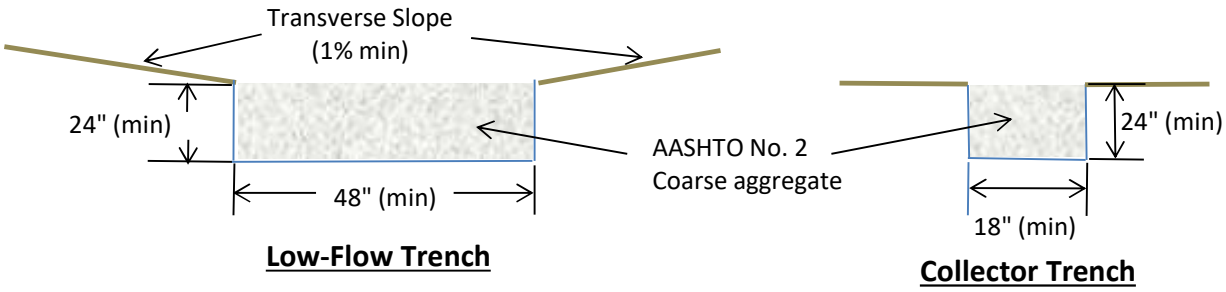
Dry Weather and Low-Flow Management

Low-Flow Trench (see graphic below)

Depth (24 inches minimum, gravel filled)	Depth =	24	inches
Width (48 inches minimum)	Width =	48	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%

Collector Trenches (see graphic below)

Depth (24 inches minimum)	Depth =	24	inches
Width (18 inches minimum)	Width =	18	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%
Spacing (25 feet on center maximum)	S =	20	feet



Low-Flow Trench **Collector Trench**

Bottom Stage (Sand Filter) Design

Depth of the Bottom Stage (4" minimum ponding)	D_{BS} =	6	in
Surface Area of Bottom Stage	A_{BS} =	190	ft^2
Dry Weather Ponded Volume (above sand layer)	V_{BS} =	95	ft^3

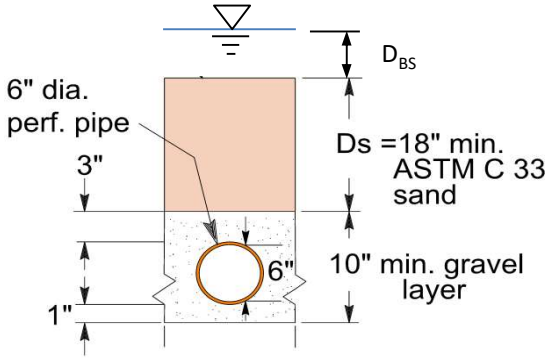
Is V_{BS} no less than 0.5% V_{BMP}? OK

Depth of ASTM-C33 sand (18 inch minimum)

Ds = 18 inches

Diameter of Subdrains: ϕ = 8 in

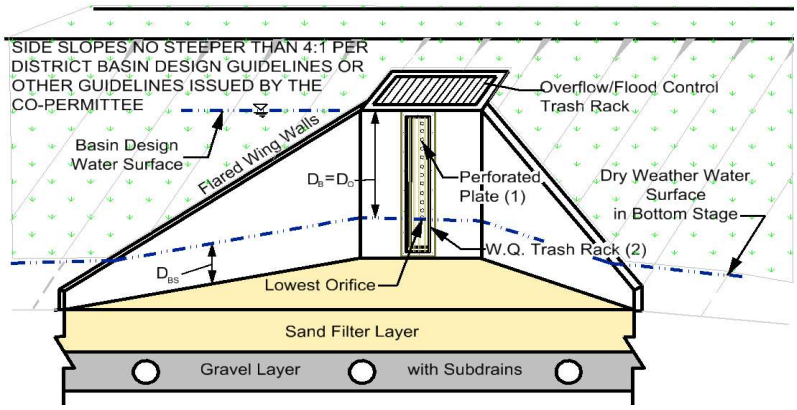
Subdrain Spacing: s = 10 ft. on center



Basin Outlet Design

Outlet Design

Assume an orifice area. Based on the information provided above, the spreadsheet provides discharge vs. stage data. Enter the volume vs. stage data for each interval. This information is used to route the volume through the basin. The size of the orifice is acceptable when the data shows that less than 50% of V_{BMP} has drained in 24 hours, and that 100% drawdown occurs within 72 hours.



Flow Rate, Q (cfs)

$$Q=CA[2g(H-H_o)]^{0.5}$$

Discharge Coefficient,

Default, C = 0.66

Other, C =

Orifice Area (ft^2)

Orifice Diameter, d; number of orifices per row, n; and number of orifice rows, N (from the bottom up).

d = 1.8 inches

n = 1 per row

N = 1 rows

Aeff = 0.018 ft^2 per row

or

Aeff = 2.543 in^2 per row

From outflow hydrograph, the time where 50% of V_{BMP} has drained from the basin (24 hour minimum):

Time (50%) = 24.86 hrs

OK

From outflow hydrograph, the time where 100% V_{BMP} has drained from the basin(within 72 hours):

Time (100 %) = 61.60 hrs

OK

Headwater Elev. / Stage (ft)	Discharge (cfs)	Volume (acre-ft)	Δt (hrs.)
0	0.0000	0.0000	
0.33	0.0540	0.020	8.97
0.67	0.0764	0.050	5.57
1.00	0.0935	0.090	5.70
1.33	0.1080	0.130	4.80
1.67	0.1208	0.210	8.46
2.00	0.1323	0.300	8.61
2.33	0.1429	0.410	9.67
2.67	0.1528	0.530	9.82
3.00	*0.1620*	*0.630*	
3.33	*0.1708*	*0.750*	
3.67	*0.1791*	*0.880*	
4.00	*0.1871*	*1.010*	
4.33			
4.67			
5.00			
5.33			
5.67			
6.00			
6.33			
6.67			
7.00			
7.33			
7.67			
8.00			
8.33			
8.67			
9.00			
9.33			
9.67			
10.00			
		∑ =	61.60

Notes:

PROJECT: 2023.06022 Tr. 31513 "Tres Cerritos"

Debris Basin "C"

Input	Basin Depth (ft)	Total Vol. (af)	Orifice #1 Q (cfs)	Orifice #2 (cfs)	Weir 1 Outflow (cfs)	Weir 2 - Emergancy Overflow (cfs)	Total Q out (cfs)	Contour Elevation	Contour Area (sf)	Inc. Volume (cf)	Inc. Volume (af)
1	**0.00**	**0**	0.00				**0.00**	1578.00	3,192		
2	**1.00**	**0.09**	16.64				**16.64**	1579.00	4,877	4,005	0.09
3	**2.00**	**0.22**	23.53				**23.53**	1580.00	6,133	5,493	0.13
4	**2.30**	**0.26**	25.23	20.51			**45.74**	1580.30	6,440	1,886	0.04
5	**3.00**	**0.37**	28.82	37.44			**66.26**	1581.00	7,155	4,756	0.11
6	**4.00**	**0.54**	33.28	52.95			**86.22**	1582.00	8,017	7,582	0.17
7	**5.00**	**0.74**	37.21	64.85	0.00		**102.05**	1583.00	8,804	8,407	0.19
8	**6.00**	**0.95**	40.76	74.88	39.96	0.00	**155.60**	1584.00	9,619	9,208	0.21
9	**7.00**	**1.18**	44.02	83.72	113.02	66.60	**307.36**	1585.00	10,475	10,044	0.23
										51,381	1.18

DEBRIS

VOLUME	427 CY	29,384	CF	X1	0.218	Y1	2.00			
	0.26 AC-FT	0.67	AC-FT	X2	0.26	Y2	2.28	1580.28		
				X3	0.371	Y3	3.00			

Orifice Outflow [Q=Ca(2gh)^0.5]		
d (in)=	24	36
C=	0.66	0.66
A (ft^2)=	3.142	7.069
FL INV	1578	1580

Weir $Q=(C_w)(L)(H)1.5$		
L (ft)	12	20
Cw	3.33	3.33
FL INV	1583.0	1584.0

PROJECT Tr 31513 Tres Cerritos
JOB No.: 01.179.000
Date 7/21/2025

EQUATION 1 - WATERSHEDS FROM 0.1 TO 3.0 mi^2

US ARMY CORPS OF ENGINEERS
DEBRIS PRODUCTION

DRAINAGE AREA	WATERSHED AREA		LOG A	PRECIPITATION (P)		LOG P	RELIEF RATIO				LOG (RR)	FIRE FACTOR (FF)	UNIT DEBRIS YIELD* (DY) (CY/SQ MI)	DEBRIS VOLUME**	
	(ACRES)	(SQ. MI.)		(INCHES)	(INCHES x 100)		ELEV DIFF (FT)	LENGTH (FT)	LENGTH (MI)	SLOPE (FT/MI)				(CY)	(AC-FT)
C.1	42.05	0.07	1.62	1.20	120.00	2.08	394.00	2,518.00	0.48	826.18	2.92	3.00	6,491.30	426.50	0.26

*Unit Debris Yield: LOG DY = 0.65 (LOG P) + 0.62 (LOG RR) + 0.18 (LOG A) +0.12 FF
Based on Regression Equation 1 (p. 15) Los Angeles District U.S. Army Corps of Engineers District Method Where:
Dy= Unit Debris Yield (yd^3/mi^2)
P=Maximum 1-Hour Precipitation
RR=Relief Ratio (ft/mi^2)
A=Drainage Area (ac)
FF=Non-Dimensional Fire Factor

** Debris Volume (cu yd) = Unit Debris Yield (cu yd/sq mi) x Area (sq mi)

PEAK BULKING RATES

DRAINAGE AREA	BULKING FACTOR (Fb)*	$Q_{(CLEAR)}$ (CFS)	$Q_{(BULK)}$ (CFS)
C	1.054	109.640	115.6

*Bulking Factor: Fb = 1 + (DY/120,000)
Based on Riverside County Hydrology Manual, (p. F-4)

Hydraulic Analysis Report

Project Data

Project Title: Tract 31513 "Tres Cerritos"

Designer:

Project Date: Monday, July 14, 2025 Project Units: U.S. Customary

Units Notes: Street capacity hydraulic calculation for Basin "C" over-

flow analysis.

Channel Analysis: Street Capacity DS Basin C @ 0.05%

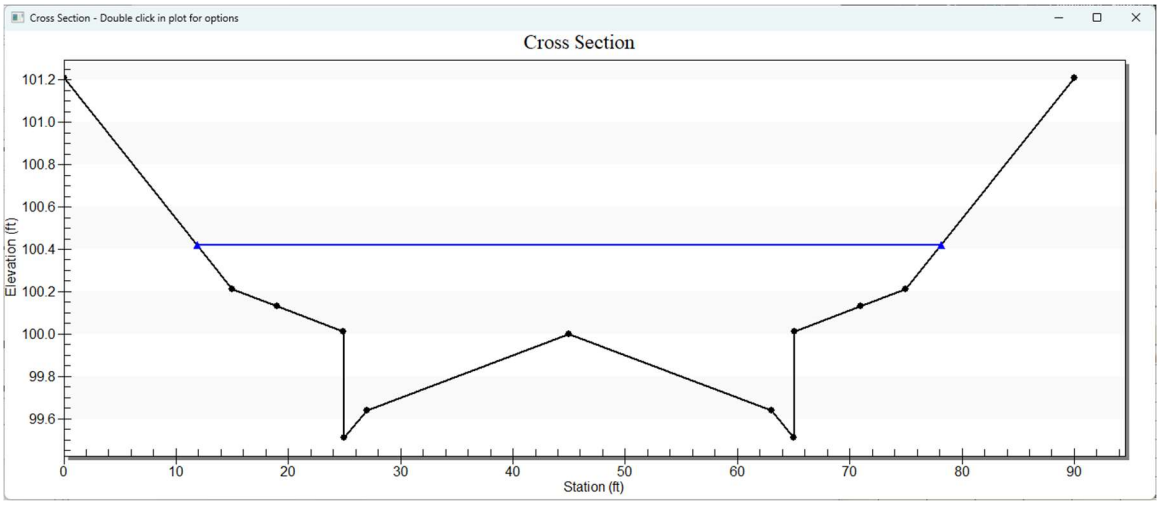
Notes:

Input Parameters

Channel Type: Custom Cross Section

Cross Section Data

Station (ft	Elevation (ft)	Manning's n
0.00	101.21	0.0300
15.00	100.21	0.0300
19.00	100.13	0.0150
24.92	100.01	0.0150
25.00	99.51	0.0150
27.00	99.64	0.0150
45.00	100.00	0.0150
63.00	99.64	0.0150
65.00	99.51	0.0150
65.08	100.01	0.0150
71.00	100.13	0.0300
75.00	100.21	0.0300
90.00	101.21	-----



Longitudinal Slope: 0.0050 ft/ft

Flow 140.5000 cfs

Result Parameters

Depth 0.9089 ft

Area of Flow 31.8203 ft^2

Wetted Perimeter 67.1543 ft

Hydraulic Radius 0.4738 ft

Average Velocity 4.4154 ft/s

Top Width 66.2680 ft

Froude Number: 1.1229

Critical Depth 0.9503 ft

Critical Velocity 4.0618 ft/s

Critical Slope: 0.0039 ft/ft

Critical Top Width 67.51 ft

Calculated Max Shear Stress 0.2836 lb/ft^2

Calculated Avg Shear Stress 0.1478 lb/ft^2

Composite Manning's n Equation: Lotter method

Manning's n: 0.0145

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2022
Study date: 07/14/25

TRACT 31513 PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY
"EAST" TRIBUTARY (COMBINATION BASIN "C" & "B")
2-YEAR
24-HOUR

Program License Serial Number 6545

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

From study/file name: tcpc242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 293
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.303 (CFS)
Total volume = 0.792 (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 3.020
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 2.28(Ft.)

Initial basin depth = 2.28 (Ft.)
Initial basin storage = 0.26 (Ac.Ft)
Initial basin outflow = 44.22 (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
1.000	0.090	16.640	0.033	0.147
2.000	0.220	23.530	0.139	0.301
2.300	0.260	45.700	0.103	0.417
3.000	0.370	66.300	0.142	0.598
4.000	0.540	86.200	0.243	0.837
5.000	0.740	102.100	0.388	1.092

6.000	0.950	155.600	0.414	1.486
7.000	1.180	307.360	0.122	2.238

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	11.4	22.85	34.28	45.70	Depth (Ft.)
0.083	0.02	0.00	0.000	O	|	|	|	|	0.00
0.167	0.06	0.00	0.000	O	|	|	|	|	0.00
0.250	0.07	0.00	0.000	O	|	|	|	|	0.00
0.333	0.08	0.01	0.000	O	|	|	|	|	0.00
0.417	0.10	0.08	0.000	O	|	|	|	|	0.00
0.500	0.11	0.10	0.001	O	|	|	|	|	0.01
0.583	0.11	0.11	0.001	O	|	|	|	|	0.01
0.667	0.11	0.11	0.001	O	|	|	|	|	0.01
0.750	0.11	0.11	0.001	O	|	|	|	|	0.01
0.833	0.13	0.12	0.001	O	|	|	|	|	0.01
0.917	0.14	0.13	0.001	O	|	|	|	|	0.01
1.000	0.15	0.14	0.001	O	|	|	|	|	0.01
1.083	0.14	0.14	0.001	O	|	|	|	|	0.01
1.167	0.12	0.13	0.001	O	|	|	|	|	0.01
1.250	0.12	0.12	0.001	O	|	|	|	|	0.01
1.333	0.12	0.12	0.001	O	|	|	|	|	0.01
1.417	0.12	0.12	0.001	O	|	|	|	|	0.01
1.500	0.11	0.12	0.001	O	|	|	|	|	0.01
1.583	0.11	0.12	0.001	O	|	|	|	|	0.01
1.667	0.11	0.12	0.001	O	|	|	|	|	0.01
1.750	0.11	0.11	0.001	O	|	|	|	|	0.01
1.833	0.13	0.12	0.001	O	|	|	|	|	0.01
1.917	0.14	0.13	0.001	O	|	|	|	|	0.01
2.000	0.15	0.14	0.001	O	|	|	|	|	0.01
2.083	0.15	0.15	0.001	O	|	|	|	|	0.01
2.167	0.15	0.15	0.001	O	|	|	|	|	0.01
2.250	0.15	0.15	0.001	O	|	|	|	|	0.01
2.333	0.15	0.15	0.001	O	|	|	|	|	0.01
2.417	0.15	0.15	0.001	O	|	|	|	|	0.01
2.500	0.15	0.15	0.001	O	|	|	|	|	0.01
2.583	0.16	0.16	0.001	O	|	|	|	|	0.01
2.667	0.18	0.17	0.001	O	|	|	|	|	0.01
2.750	0.19	0.18	0.001	O	|	|	|	|	0.01
2.833	0.19	0.19	0.001	O	|	|	|	|	0.01
2.917	0.19	0.19	0.001	O	|	|	|	|	0.01
3.000	0.19	0.19	0.001	O	|	|	|	|	0.01
3.083	0.19	0.19	0.001	O	|	|	|	|	0.01
3.167	0.19	0.19	0.001	O	|	|	|	|	0.01
3.250	0.19	0.19	0.001	O	|	|	|	|	0.01
3.333	0.19	0.19	0.001	O	|	|	|	|	0.01
3.417	0.19	0.19	0.001	O	|	|	|	|	0.01
3.500	0.19	0.19	0.001	O	|	|	|	|	0.01
3.583	0.19	0.19	0.001	O	|	|	|	|	0.01
3.667	0.19	0.19	0.001	O	|	|	|	|	0.01
3.750	0.19	0.19	0.001	O	|	|	|	|	0.01
3.833	0.20	0.20	0.001	O	|	|	|	|	0.01
3.917	0.22	0.21	0.001	O	|	|	|	|	0.01
4.000	0.23	0.22	0.001	O	|	|	|	|	0.01
4.083	0.23	0.23	0.001	O	|	|	|	|	0.01
4.167	0.23	0.23	0.001	O	|	|	|	|	0.01
4.250	0.23	0.23	0.001	O	|	|	|	|	0.01
4.333	0.24	0.23	0.001	O	|	|	|	|	0.01
4.417	0.26	0.25	0.001	O	|	|	|	|	0.01

4.500	0.26	0.26	0.001	O	|	|	|	0.02
4.583	0.27	0.26	0.001	O	|	|	|	0.02
4.667	0.27	0.27	0.001	O	|	|	|	0.02
4.750	0.27	0.27	0.001	O	|	|	|	0.02
4.833	0.28	0.27	0.001	O	|	|	|	0.02
4.917	0.30	0.29	0.002	O	|	|	|	0.02
5.000	0.30	0.30	0.002	O	|	|	|	0.02
5.083	0.28	0.29	0.002	O	|	|	|	0.02
5.167	0.25	0.27	0.001	O	|	|	|	0.02
5.250	0.24	0.25	0.001	O	|	|	|	0.01
5.333	0.25	0.24	0.001	O	|	|	|	0.01
5.417	0.26	0.25	0.001	O	|	|	|	0.02
5.500	0.26	0.26	0.001	O	|	|	|	0.02
5.583	0.28	0.27	0.001	O	|	|	|	0.02
5.667	0.30	0.28	0.002	O	|	|	|	0.02
5.750	0.30	0.30	0.002	O	|	|	|	0.02
5.833	0.30	0.30	0.002	O	|	|	|	0.02
5.917	0.31	0.30	0.002	O	|	|	|	0.02
6.000	0.31	0.31	0.002	O	|	|	|	0.02
6.083	0.32	0.31	0.002	O	|	|	|	0.02
6.167	0.34	0.32	0.002	O	|	|	|	0.02
6.250	0.34	0.34	0.002	O	|	|	|	0.02
6.333	0.34	0.34	0.002	O	|	|	|	0.02
6.417	0.34	0.34	0.002	O	|	|	|	0.02
6.500	0.34	0.34	0.002	O	|	|	|	0.02
6.583	0.36	0.35	0.002	O	|	|	|	0.02
6.667	0.37	0.36	0.002	O	|	|	|	0.02
6.750	0.38	0.37	0.002	O	|	|	|	0.02
6.833	0.38	0.38	0.002	O	|	|	|	0.02
6.917	0.38	0.38	0.002	O	|	|	|	0.02
7.000	0.38	0.38	0.002	O	|	|	|	0.02
7.083	0.38	0.38	0.002	O	|	|	|	0.02
7.167	0.38	0.38	0.002	O	|	|	|	0.02
7.250	0.38	0.38	0.002	O	|	|	|	0.02
7.333	0.39	0.39	0.002	O	|	|	|	0.02
7.417	0.41	0.40	0.002	O	|	|	|	0.02
7.500	0.42	0.41	0.002	O	|	|	|	0.02
7.583	0.43	0.42	0.002	O	|	|	|	0.03
7.667	0.45	0.44	0.002	O	|	|	|	0.03
7.750	0.46	0.45	0.002	O	|	|	|	0.03
7.833	0.47	0.46	0.002	O	|	|	|	0.03
7.917	0.49	0.47	0.003	O	|	|	|	0.03
8.000	0.49	0.49	0.003	O	|	|	|	0.03
8.083	0.52	0.50	0.003	O	|	|	|	0.03
8.167	0.56	0.53	0.003	O	|	|	|	0.03
8.250	0.57	0.55	0.003	O	|	|	|	0.03
8.333	0.57	0.57	0.003	O	|	|	|	0.03
8.417	0.57	0.57	0.003	O	|	|	|	0.03
8.500	0.57	0.57	0.003	O	|	|	|	0.03
8.583	0.59	0.58	0.003	O	|	|	|	0.03
8.667	0.60	0.59	0.003	O	|	|	|	0.04
8.750	0.61	0.60	0.003	O	|	|	|	0.04
8.833	0.62	0.61	0.003	O	|	|	|	0.04
8.917	0.64	0.63	0.003	O	|	|	|	0.04
9.000	0.65	0.64	0.003	O	|	|	|	0.04
9.083	0.67	0.66	0.004	O	|	|	|	0.04
9.167	0.71	0.68	0.004	O	|	|	|	0.04
9.250	0.72	0.71	0.004	O	|	|	|	0.04
9.333	0.74	0.72	0.004	O	|	|	|	0.04
9.417	0.76	0.74	0.004	O	|	|	|	0.04
9.500	0.76	0.76	0.004	O	|	|	|	0.05
9.583	0.78	0.77	0.004	O	|	|	|	0.05
9.667	0.80	0.78	0.004	O	|	|	|	0.05

9.750	0.80	0.79	0.004	O				0.05
9.833	0.81	0.80	0.004	O				0.05
9.917	0.83	0.82	0.004	O				0.05
10.000	0.84	0.83	0.005	O				0.05
10.083	0.76	0.81	0.004	O				0.05
10.167	0.64	0.72	0.004	O				0.04
10.250	0.60	0.64	0.003	O				0.04
10.333	0.59	0.61	0.003	O				0.04
10.417	0.58	0.59	0.003	O				0.04
10.500	0.57	0.58	0.003	O				0.03
10.583	0.63	0.60	0.003	O				0.04
10.667	0.72	0.66	0.004	O				0.04
10.750	0.75	0.72	0.004	O				0.04
10.833	0.76	0.74	0.004	O				0.04
10.917	0.76	0.76	0.004	O				0.05
11.000	0.77	0.76	0.004	O				0.05
11.083	0.76	0.76	0.004	O				0.05
11.167	0.74	0.75	0.004	O				0.05
11.250	0.73	0.74	0.004	O				0.04
11.333	0.73	0.73	0.004	O				0.04
11.417	0.73	0.73	0.004	O				0.04
11.500	0.73	0.73	0.004	O				0.04
11.583	0.71	0.72	0.004	O				0.04
11.667	0.67	0.69	0.004	O				0.04
11.750	0.66	0.67	0.004	O				0.04
11.833	0.67	0.66	0.004	O				0.04
11.917	0.68	0.67	0.004	O				0.04
12.000	0.69	0.68	0.004	O				0.04
12.083	0.77	0.72	0.004	O				0.04
12.167	0.90	0.81	0.004	O				0.05
12.250	0.93	0.89	0.005	O				0.05
12.333	0.96	0.93	0.005	O				0.06
12.417	0.98	0.96	0.005	O				0.06
12.500	0.99	0.98	0.005	O				0.06
12.583	1.02	1.00	0.005	O				0.06
12.667	1.05	1.03	0.006	O				0.06
12.750	1.07	1.05	0.006	O				0.06
12.833	1.08	1.07	0.006	O				0.06
12.917	1.10	1.09	0.006	O				0.07
13.000	1.11	1.10	0.006	O				0.07
13.083	1.17	1.13	0.006	O				0.07
13.167	1.26	1.19	0.006	O				0.07
13.250	1.28	1.25	0.007	O				0.08
13.333	1.29	1.28	0.007	O				0.08
13.417	1.30	1.29	0.007	O				0.08
13.500	1.30	1.30	0.007	O				0.08
13.583	1.18	1.25	0.007	O				0.08
13.667	0.98	1.12	0.006	O				0.07
13.750	0.93	0.99	0.005	O				0.06
13.833	0.90	0.93	0.005	O				0.06
13.917	0.89	0.90	0.005	O				0.05
14.000	0.88	0.89	0.005	O				0.05
14.083	0.93	0.90	0.005	O				0.05
14.167	1.00	0.95	0.005	O				0.06
14.250	1.02	1.00	0.005	O				0.06
14.333	1.02	1.01	0.005	O				0.06
14.417	1.00	1.01	0.005	O				0.06
14.500	1.00	1.00	0.005	O				0.06
14.583	1.00	1.00	0.005	O				0.06
14.667	1.00	1.00	0.005	O				0.06
14.750	1.00	1.00	0.005	O				0.06
14.833	0.99	0.99	0.005	O				0.06
14.917	0.97	0.98	0.005	O				0.06

15.000	0.96	0.97	0.005	0	|	|	|	0.06
15.083	0.95	0.96	0.005	0	|	|	|	0.06
15.167	0.93	0.94	0.005	0	|	|	|	0.06
15.250	0.92	0.93	0.005	0	|	|	|	0.06
15.333	0.91	0.92	0.005	0	|	|	|	0.06
15.417	0.89	0.91	0.005	0	|	|	|	0.05
15.500	0.89	0.89	0.005	0	|	|	|	0.05
15.583	0.84	0.87	0.005	0	|	|	|	0.05
15.667	0.76	0.82	0.004	0	|	|	|	0.05
15.750	0.74	0.77	0.004	0	|	|	|	0.05
15.833	0.74	0.75	0.004	0	|	|	|	0.04
15.917	0.73	0.74	0.004	0	|	|	|	0.04
16.000	0.73	0.73	0.004	0	|	|	|	0.04
16.083	0.56	0.66	0.004	0	|	|	|	0.04
16.167	0.28	0.48	0.003	0	|	|	|	0.03
16.250	0.21	0.30	0.002	0	|	|	|	0.02
16.333	0.18	0.22	0.001	0	|	|	|	0.01
16.417	0.17	0.18	0.001	0	|	|	|	0.01
16.500	0.15	0.17	0.001	0	|	|	|	0.01
16.583	0.14	0.15	0.001	0	|	|	|	0.01
16.667	0.12	0.14	0.001	0	|	|	|	0.01
16.750	0.12	0.12	0.001	0	|	|	|	0.01
16.833	0.12	0.12	0.001	0	|	|	|	0.01
16.917	0.12	0.12	0.001	0	|	|	|	0.01
17.000	0.11	0.12	0.001	0	|	|	|	0.01
17.083	0.14	0.12	0.001	0	|	|	|	0.01
17.167	0.17	0.15	0.001	0	|	|	|	0.01
17.250	0.18	0.17	0.001	0	|	|	|	0.01
17.333	0.19	0.18	0.001	0	|	|	|	0.01
17.417	0.19	0.19	0.001	0	|	|	|	0.01
17.500	0.19	0.19	0.001	0	|	|	|	0.01
17.583	0.19	0.19	0.001	0	|	|	|	0.01
17.667	0.19	0.19	0.001	0	|	|	|	0.01
17.750	0.19	0.19	0.001	0	|	|	|	0.01
17.833	0.18	0.19	0.001	0	|	|	|	0.01
17.917	0.16	0.17	0.001	0	|	|	|	0.01
18.000	0.16	0.16	0.001	0	|	|	|	0.01
18.083	0.16	0.16	0.001	0	|	|	|	0.01
18.167	0.15	0.16	0.001	0	|	|	|	0.01
18.250	0.15	0.15	0.001	0	|	|	|	0.01
18.333	0.15	0.15	0.001	0	|	|	|	0.01
18.417	0.15	0.15	0.001	0	|	|	|	0.01
18.500	0.15	0.15	0.001	0	|	|	|	0.01
18.583	0.14	0.15	0.001	0	|	|	|	0.01
18.667	0.12	0.14	0.001	0	|	|	|	0.01
18.750	0.12	0.12	0.001	0	|	|	|	0.01
18.833	0.11	0.12	0.001	0	|	|	|	0.01
18.917	0.09	0.10	0.001	0	|	|	|	0.01
19.000	0.08	0.09	0.000	0	|	|	|	0.01
19.083	0.09	0.09	0.000	0	|	|	|	0.01
19.167	0.11	0.10	0.001	0	|	|	|	0.01
19.250	0.11	0.11	0.001	0	|	|	|	0.01
19.333	0.12	0.11	0.001	0	|	|	|	0.01
19.417	0.14	0.13	0.001	0	|	|	|	0.01
19.500	0.15	0.14	0.001	0	|	|	|	0.01
19.583	0.14	0.14	0.001	0	|	|	|	0.01
19.667	0.12	0.13	0.001	0	|	|	|	0.01
19.750	0.12	0.12	0.001	0	|	|	|	0.01
19.833	0.11	0.11	0.001	0	|	|	|	0.01
19.917	0.09	0.10	0.001	0	|	|	|	0.01
20.000	0.08	0.09	0.000	0	|	|	|	0.01
20.083	0.09	0.09	0.000	0	|	|	|	0.01
20.167	0.11	0.10	0.001	0	|	|	|	0.01

20.250	0.11	0.11	0.001	O	|	|	|	0.01
20.333	0.11	0.11	0.001	O	|	|	|	0.01
20.417	0.11	0.11	0.001	O	|	|	|	0.01
20.500	0.11	0.11	0.001	O	|	|	|	0.01
20.583	0.11	0.11	0.001	O	|	|	|	0.01
20.667	0.11	0.11	0.001	O	|	|	|	0.01
20.750	0.11	0.11	0.001	O	|	|	|	0.01
20.833	0.10	0.11	0.001	O	|	|	|	0.01
20.917	0.09	0.10	0.001	O	|	|	|	0.01
21.000	0.08	0.09	0.000	O	|	|	|	0.01
21.083	0.09	0.09	0.000	O	|	|	|	0.01
21.167	0.11	0.10	0.001	O	|	|	|	0.01
21.250	0.11	0.11	0.001	O	|	|	|	0.01
21.333	0.10	0.11	0.001	O	|	|	|	0.01
21.417	0.08	0.10	0.001	O	|	|	|	0.01
21.500	0.08	0.09	0.000	O	|	|	|	0.01
21.583	0.09	0.09	0.000	O	|	|	|	0.01
21.667	0.11	0.10	0.001	O	|	|	|	0.01
21.750	0.11	0.11	0.001	O	|	|	|	0.01
21.833	0.10	0.11	0.001	O	|	|	|	0.01
21.917	0.08	0.10	0.001	O	|	|	|	0.01
22.000	0.08	0.09	0.000	O	|	|	|	0.01
22.083	0.09	0.09	0.000	O	|	|	|	0.01
22.167	0.11	0.10	0.001	O	|	|	|	0.01
22.250	0.11	0.11	0.001	O	|	|	|	0.01
22.333	0.10	0.11	0.001	O	|	|	|	0.01
22.417	0.08	0.10	0.001	O	|	|	|	0.01
22.500	0.08	0.09	0.000	O	|	|	|	0.01
22.583	0.08	0.08	0.000	O	|	|	|	0.00
22.667	0.08	0.08	0.000	O	|	|	|	0.00
22.750	0.08	0.08	0.000	O	|	|	|	0.00
22.833	0.08	0.08	0.000	O	|	|	|	0.00
22.917	0.08	0.08	0.000	O	|	|	|	0.00
23.000	0.08	0.08	0.000	O	|	|	|	0.00
23.083	0.08	0.08	0.000	O	|	|	|	0.00
23.167	0.08	0.08	0.000	O	|	|	|	0.00
23.250	0.08	0.08	0.000	O	|	|	|	0.00
23.333	0.08	0.08	0.000	O	|	|	|	0.00
23.417	0.08	0.08	0.000	O	|	|	|	0.00
23.500	0.08	0.08	0.000	O	|	|	|	0.00
23.583	0.08	0.08	0.000	O	|	|	|	0.00
23.667	0.08	0.08	0.000	O	|	|	|	0.00
23.750	0.08	0.08	0.000	O	|	|	|	0.00
23.833	0.08	0.08	0.000	O	|	|	|	0.00
23.917	0.08	0.08	0.000	O	|	|	|	0.00
24.000	0.08	0.08	0.000	O	|	|	|	0.00
24.083	0.05	0.07	0.000	O	|	|	|	0.00
24.167	0.02	0.04	0.000	O	|	|	|	0.00
24.250	0.01	0.02	0.000	O	|	|	|	0.00
24.333	0.00	0.01	0.000	O	|	|	|	0.00
24.417	0.00	0.00	0.000	O	|	|	|	0.00
24.500	0.00	0.00	0.000	O	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

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

Number of intervals = 294
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.299 (CFS)
Total volume = 0.791 (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        3.020 to Point/Station        2.460
**** STREAM ROUTING SCS CONVEX METHOD ****
__________________________________________________________________________
HYDROGRAPH STREAM ROUTING DATA:
Length of stream =   2423.00 (Ft.)
Elevation difference =   75.90 (Ft.)
Slope of channel =  0.031325 (Vert/Horiz)
Channel type - Pipe


Pipe length  =  2423.00(Ft.)   Elevation difference =  75.90(Ft.)
Manning's N = 0.013   No. of pipes = 1
Pipe evaluation using mean flow rate of hydrograph
Required pipe flow  =     0.534(CFS)
Given pipe size =     48.00(In.)
Calculated individual pipe flow  =     0.534(CFS)
Normal flow depth in pipe =    1.63(In.)
Flow top width inside pipe =   17.39(In.)
Critical Depth =    0.21(Ft.)
Pipe flow velocity =      4.04(Ft/s)
Travel time through pipe =   10.00 min.


Pipe length  =  2423.00(Ft.)   Elevation difference =  75.90(Ft.)
Manning's N = 0.013   No. of pipes = 1
Pipe evaluation using maximum flow rate of hydrograph
Required pipe flow  =     1.299(CFS)
Given pipe size =     48.00(In.)
Calculated individual pipe flow  =     1.299(CFS)
Normal flow depth in pipe =    2.47(In.)
Flow top width inside pipe =   21.22(In.)
Critical depth could not be calculated.
Pipe flow velocity =      5.30(Ft/s)
Travel time through pipe =    7.62 min.


********************** SCS CONVEX CHANNEL ROUTING **********************
Convex method of stream routing  data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
          where c* = 1 - (1-c)^e and dt = c(length)/velocity
          c(v/v+1.7) =   0.7571   Travel time =   7.62 (min.)
        dt*(unit time interval) =   5.00(min.),  e=   0.9109
        dt(routing time-step) =   5.77 (min.),   c* =   0.7244

Output hydrograph delayed by 1  unit time increments


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                 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)	Out = O(CFS)	In = I	0	0.3	0.6	1.0	1.3
0+ 5	0.0000	0.00	O				
0+10	0.0000	0.00	O				
0+15	0.0000	0.00	O				
0+20	0.0000	0.01	O				
0+25	0.0013	0.08	O I				
0+30	0.0163	0.10	O I				
0+35	0.0621	0.11	O I				
0+40	0.0910	0.11	OI				
0+45	0.1047	0.11	O				
0+50	0.1106	0.12	O				
0+55	0.1136	0.13	OI				
1+ 0	0.1188	0.14	OI				
1+ 5	0.1293	0.14	OI				
1+10	0.1397	0.13	O				
1+15	0.1422	0.12	IO				
1+20	0.1355	0.12	IO				
1+25	0.1267	0.12	O				
1+30	0.1211	0.12	O				
1+35	0.1181	0.12	O				
1+40	0.1163	0.12	O				
1+45	0.1155	0.11	O				
1+50	0.1151	0.12	O				
1+55	0.1155	0.13	OI				
2+ 0	0.1195	0.14	OI				
2+ 5	0.1295	0.15	OI				
2+10	0.1402	0.15	O				
2+15	0.1467	0.15	O				
2+20	0.1501	0.15	O				
2+25	0.1519	0.15	O				
2+30	0.1528	0.15	O				
2+35	0.1532	0.16	O				
2+40	0.1537	0.17	OI				
2+45	0.1578	0.18	OI				
2+50	0.1679	0.19	O				
2+55	0.1785	0.19	O				
3+ 0	0.1850	0.19	O				
3+ 5	0.1884	0.19	O				
3+10	0.1902	0.19	O				
3+15	0.1911	0.19	O				
3+20	0.1915	0.19	O				
3+25	0.1916	0.19	O				
3+30	0.1916	0.19	O				
3+35	0.1916	0.19	O				
3+40	0.1916	0.19	O				
3+45	0.1916	0.19	O				
3+50	0.1916	0.20	OI				
3+55	0.1921	0.21	OI				
4+ 0	0.1961	0.22	O				
4+ 5	0.2062	0.23	O				
4+10	0.2169	0.23	OI				
4+15	0.2233	0.23	OI				
4+20	0.2267	0.23	OI				
4+25	0.2290	0.25	O				
4+30	0.2339	0.26	O				
4+35	0.2444	0.26	OI				
4+40	0.2551	0.27	OI				
4+45	0.2616	0.27	O				
4+50	0.2651	0.27	O				
4+55	0.2673	0.29	O				
5+ 0	0.2723	0.30	OI				

5+ 5	0.2827	0.29	OI				
5+10	0.2926	0.27	IO				
5+15	0.2910	0.25	IO				
5+20	0.2743	0.24	IO				
5+25	0.2552	0.25	O				
5+30	0.2472	0.26	OI				
5+35	0.2508	0.27	OI				
5+40	0.2584	0.28	OI				
5+45	0.2671	0.30	OI				
5+50	0.2799	0.30	OI				
5+55	0.2922	0.30	OI				
6+ 0	0.2995	0.31	O				
6+ 5	0.3032	0.31	O				
6+10	0.3056	0.32	O				
6+15	0.3106	0.34	OI				
6+20	0.3210	0.34	OI				
6+25	0.3318	0.34	O				
6+30	0.3383	0.34	O				
6+35	0.3417	0.35	O				
6+40	0.3440	0.36	OI				
6+45	0.3489	0.37	OI				
6+50	0.3593	0.38	O				
6+55	0.3701	0.38	O				
7+ 0	0.3766	0.38	O				
7+ 5	0.3801	0.38	O				
7+10	0.3819	0.38	O				
7+15	0.3828	0.38	O				
7+20	0.3831	0.39	O				
7+25	0.3837	0.40	OI				
7+30	0.3877	0.41	OI				
7+35	0.3978	0.42	O				
7+40	0.4089	0.44	OI				
7+45	0.4194	0.45	OI				
7+50	0.4329	0.46	OI				
7+55	0.4458	0.47	OI				
8+ 0	0.4573	0.49	OI				
8+ 5	0.4711	0.50	OI				
8+10	0.4845	0.53	O I				
8+15	0.5000	0.55	O I				
8+20	0.5240	0.57	OI				
8+25	0.5472	0.57	OI				
8+30	0.5611	0.57	O				
8+35	0.5683	0.58	O				
8+40	0.5725	0.59	OI				
8+45	0.5784	0.60	OI				
8+50	0.5891	0.61	O				
8+55	0.6005	0.63	OI				
9+ 0	0.6110	0.64	OI				
9+ 5	0.6246	0.66	OI				
9+10	0.6379	0.68	O I				
9+15	0.6534	0.71	OI				
9+20	0.6773	0.72	O I				
9+25	0.7010	0.74	OI				
9+30	0.7189	0.76	OI				
9+35	0.7362	0.77	OI				
9+40	0.7510	0.78	OI				
9+45	0.7634	0.79	OI				
9+50	0.7776	0.80	OI				
9+55	0.7907	0.82	OI				
10+ 0	0.8022	0.83	OI				
10+ 5	0.8160	0.81	IO				
10+10	0.8257	0.72	I O				
10+15	0.8048	0.64	I O				

10+20	0.7380	0.61	|	|	I | O	|	|
10+25	0.6653	0.59	|	|	I O	|	|
10+30	0.6210	0.58	|	|	I O|	|	|
10+35	0.5974	0.60	|	|	O |	|	|
10+40	0.5869	0.66	|	|	O I	|	|
10+45	0.6008	0.72	|	|	O | I	|	|
10+50	0.6488	0.74	|	|	O| I	|	|
10+55	0.7014	0.76	|	|	|O I	|	|
11+ 0	0.7334	0.76	|	|	| OI	|	|
11+ 5	0.7504	0.76	|	|	| O	|	|
11+10	0.7591	0.75	|	|	| O	|	|
11+15	0.7596	0.74	|	|	| IO	|	|
11+20	0.7512	0.73	|	|	| IO	|	|
11+25	0.7411	0.73	|	|	| O	|	|
11+30	0.7348	0.73	|	|	| O	|	|
11+35	0.7315	0.72	|	|	| O	|	|
11+40	0.7288	0.69	|	|	|IO	|	|
11+45	0.7198	0.67	|	|	I O	|	|
11+50	0.6993	0.66	|	|	IO	|	|
11+55	0.6783	0.67	|	|	O	|	|
12+ 0	0.6694	0.68	|	|	O	|	|
12+ 5	0.6726	0.72	|	|	O I	|	|
12+10	0.6826	0.81	|	|	|O I	|	|
12+15	0.7156	0.89	|	|	| O I	|	|
12+20	0.7889	0.93	|	|	| O I	|	|
12+25	0.8655	0.96	|	|	| O I|	|	|
12+30	0.9156	0.98	|	|	| O I	|	|
12+35	0.9500	1.00	|	|	| OI	|	|
12+40	0.9744	1.03	|	|	| O|I	|	|
12+45	0.9953	1.05	|	|	| O I	|	|
12+50	1.0213	1.07	|	|	| |OI	|	|
12+55	1.0456	1.09	|	|	| | OI	|	|
13+ 0	1.0638	1.10	|	|	| | OI	|	|
13+ 5	1.0811	1.13	|	|	| | OI	|	|
13+10	1.0976	1.19	|	|	| | O I	|	|
13+15	1.1262	1.25	|	|	| | O I	|	|
13+20	1.1807	1.28	|	|	| | O I|	|	|
13+25	1.2361	1.29	|	|	| | OI|	|	|
13+30	1.2694	1.30	|	|	| | OI	|	|
13+35	1.2868	1.25	|	|	| | IO|	|	|
13+40	1.2915	1.12	|	|	| | I O|	|	|
13+45	1.2515	0.99	|	|	| | I O	|	|
13+50	1.1423	0.93	|	|	| | I | O	|	|
13+55	1.0256	0.90	|	|	| | I |O	|	|
14+ 0	0.9547	0.89	|	|	| | I O|	|	|
14+ 5	0.9171	0.90	|	|	| | IO |	|	|
14+10	0.8987	0.95	|	|	| | O I|	|	|
14+15	0.9050	1.00	|	|	| | O I	|	|
14+20	0.9416	1.01	|	|	| | O |I	|	|
14+25	0.9826	1.01	|	|	| | OI	|	|
14+30	1.0040	1.00	|	|	| | O	|	|
14+35	1.0074	1.00	|	|	| | IO	|	|
14+40	1.0040	1.00	|	|	| | O	|	|
14+45	1.0012	1.00	|	|	| | O	|	|
14+50	0.9991	0.99	|	|	| | O	|	|
14+55	0.9973	0.98	|	|	| | O	|	|
15+ 0	0.9925	0.97	|	|	| | IO	|	|
15+ 5	0.9821	0.96	|	|	| | IO	|	|
15+10	0.9710	0.94	|	|	| | O|	|	|
15+15	0.9604	0.93	|	|	| | IO|	|	|
15+20	0.9469	0.92	|	|	| | IO|	|	|
15+25	0.9340	0.91	|	|	| | IO |	|	|
15+30	0.9226	0.89	|	|	| | IO |	|	|

15+35	0.9087	0.87	|	|	| IO	|	|
15+40	0.8945	0.82	|	|	| I O	|	|
15+45	0.8709	0.77	|	|	| I O |	|	|
15+50	0.8268	0.75	|	|	| I O |	|	|
15+55	0.7822	0.74	|	|	| I O |	|	|
16+ 0	0.7554	0.73	|	|	| IO |	|	|
16+ 5	0.7414	0.66	|	|	I O |	|	|
16+10	0.7276	0.48	|	I |	O |	|	|
16+15	0.6633	0.30	|	I |	O |	|	|
16+20	0.5107	0.22	| I |	O |	|	|	|
16+25	0.3502	0.18	| I |	O |	|	|	|
16+30	0.2532	0.17	| I O |	|	|	|	|
16+35	0.2018	0.15	| I O |	|	|	|	|
16+40	0.1741	0.14	| IO |	|	|	|	|
16+45	0.1564	0.12	| IO |	|	|	|	|
16+50	0.1412	0.12	| IO |	|	|	|	|
16+55	0.1289	0.12	| O |	|	|	|	|
17+ 0	0.1219	0.12	| O |	|	|	|	|
17+ 5	0.1183	0.12	| O |	|	|	|	|
17+10	0.1173	0.15	| OI |	|	|	|	|
17+15	0.1244	0.17	| O I |	|	|	|	|
17+20	0.1443	0.18	| OI |	|	|	|	|
17+25	0.1655	0.19	| O |	|	|	|	|
17+30	0.1784	0.19	| O |	|	|	|	|
17+35	0.1852	0.19	| O |	|	|	|	|
17+40	0.1888	0.19	| O |	|	|	|	|
17+45	0.1906	0.19	| O |	|	|	|	|
17+50	0.1913	0.19	| O |	|	|	|	|
17+55	0.1911	0.17	| O |	|	|	|	|
18+ 0	0.1871	0.16	| O |	|	|	|	|
18+ 5	0.1771	0.16	| IO |	|	|	|	|
18+10	0.1664	0.16	| IO |	|	|	|	|
18+15	0.1600	0.15	| O |	|	|	|	|
18+20	0.1565	0.15	| O |	|	|	|	|
18+25	0.1547	0.15	| O |	|	|	|	|
18+30	0.1538	0.15	| O |	|	|	|	|
18+35	0.1535	0.15	| O |	|	|	|	|
18+40	0.1529	0.14	| O |	|	|	|	|
18+45	0.1489	0.12	| IO |	|	|	|	|
18+50	0.1388	0.12	| IO |	|	|	|	|
18+55	0.1277	0.10	| O |	|	|	|	|
19+ 0	0.1172	0.09	| IO |	|	|	|	|
19+ 5	0.1037	0.09	| IO |	|	|	|	|
19+10	0.0916	0.10	| O |	|	|	|	|
19+15	0.0883	0.11	| OI |	|	|	|	|
19+20	0.0946	0.11	| OI |	|	|	|	|
19+25	0.1038	0.13	| O |	|	|	|	|
19+30	0.1133	0.14	| OI |	|	|	|	|
19+35	0.1265	0.14	| OI |	|	|	|	|
19+40	0.1384	0.13	| O |	|	|	|	|
19+45	0.1417	0.12	| IO |	|	|	|	|
19+50	0.1354	0.11	| IO |	|	|	|	|
19+55	0.1262	0.10	| O |	|	|	|	|
20+ 0	0.1167	0.09	| IO |	|	|	|	|
20+ 5	0.1035	0.09	| IO |	|	|	|	|
20+10	0.0916	0.10	| O |	|	|	|	|
20+15	0.0883	0.11	| OI |	|	|	|	|
20+20	0.0946	0.11	| OI |	|	|	|	|
20+25	0.1033	0.11	| O |	|	|	|	|
20+30	0.1089	0.11	| O |	|	|	|	|
20+35	0.1119	0.11	| O |	|	|	|	|
20+40	0.1136	0.11	| O |	|	|	|	|
20+45	0.1145	0.11	| O |	|	|	|	|

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  20+50       0.1148      0.11  |  O      |         |         |         |
  20+55       0.1145      0.10  |  O      |         |         |         |
  21+ 0       0.1105      0.09  | IO      |         |         |         |
  21+ 5       0.1004      0.09  | IO      |         |         |         |
  21+10       0.0902      0.10  | O       |         |         |         |
  21+15       0.0878      0.11  | OI      |         |         |         |
  21+20       0.0944      0.11  | OI      |         |         |         |
  21+25       0.1029      0.10  | IO      |         |         |         |
  21+30       0.1044      0.09  | IO      |         |         |         |
  21+35       0.0974      0.09  | O       |         |         |         |
  21+40       0.0888      0.10  | O       |         |         |         |
  21+45       0.0873      0.11  | OI      |         |         |         |
  21+50       0.0943      0.11  | OI      |         |         |         |
  21+55       0.1028      0.10  | IO      |         |         |         |
  22+ 0       0.1044      0.09  | IO      |         |         |         |
  22+ 5       0.0974      0.09  | O       |         |         |         |
  22+10       0.0888      0.10  | O       |         |         |         |
  22+15       0.0873      0.11  | OI      |         |         |         |
  22+20       0.0943      0.11  | OI      |         |         |         |
  22+25       0.1028      0.10  | IO      |         |         |         |
  22+30       0.1044      0.09  | IO      |         |         |         |
  22+35       0.0974      0.08  | O       |         |         |         |
  22+40       0.0884      0.08  | O       |         |         |         |
  22+45       0.0828      0.08  | O       |         |         |         |
  22+50       0.0797      0.08  | O       |         |         |         |
  22+55       0.0780      0.08  | O       |         |         |         |
  23+ 0       0.0771      0.08  | O       |         |         |         |
  23+ 5       0.0768      0.08  | O       |         |         |         |
  23+10       0.0767      0.08  | O       |         |         |         |
  23+15       0.0767      0.08  | O       |         |         |         |
  23+20       0.0767      0.08  | O       |         |         |         |
  23+25       0.0767      0.08  | O       |         |         |         |
  23+30       0.0767      0.08  | O       |         |         |         |
  23+35       0.0767      0.08  | O       |         |         |         |
  23+40       0.0767      0.08  | O       |         |         |         |
  23+45       0.0767      0.08  | O       |         |         |         |
  23+50       0.0767      0.08  | O       |         |         |         |
  23+55       0.0767      0.08  | O       |         |         |         |
  24+ 0       0.0767      0.08  | O       |         |         |         |
  24+ 5       0.0767      0.07  | O       |         |         |         |
  24+10       0.0758      0.04  |IO       |         |         |         |
  24+15       0.0677      0.02  I O       |         |         |         |
  24+20       0.0476      0.01  IO        |         |         |         |
  24+25       0.0262      0.00  O         |         |         |         |
  24+30       0.0133      0.00  O         |         |         |         |
  24+35       0.0065      0.00  O         |         |         |         |
  24+40       0.0028      0.00  O         |         |         |         |
-------------------------------------------------------------------------
      ***************************HYDROGRAPH DATA**************************
                Number of intervals =   296
                Time interval =    5.0 (Min.)
                Maximum/Peak flow rate =        1.291 (CFS)
                Total volume =       0.791 (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 2.000 to Point/Station 2.460
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

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

From study/file name: tcpb242.rte

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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	0.9	1.8	2.7	3.6
0+ 5	0.0482	0.05	Q				
0+10	0.1111	0.11	|Q				
0+15	0.1256	0.13	|Q				
0+20	0.1559	0.16	|Q				
0+25	0.1904	0.19		Q				
0+30	0.1987	0.21		Q				
0+35	0.2018	0.26		Q				
0+40	0.2033	0.29		qQ				
0+45	0.2039	0.31		qQ				
0+50	0.2280	0.34		qQ				
0+55	0.2595	0.37		q Q				
1+ 0	0.2667	0.39		q Q				
1+ 5	0.2457	0.38		q Q				
1+10	0.2157	0.36		qQ				
1+15	0.2090	0.35		qQ				
1+20	0.2059	0.34		qQ				
1+25	0.2044	0.33		qQ				
1+30	0.2039	0.33		qQ				
1+35	0.2039	0.32		qQ				
1+40	0.2039	0.32		qQ				
1+45	0.2039	0.32		qQ				
1+50	0.2280	0.34		qQ				
1+55	0.2595	0.37		q Q				
2+ 0	0.2667	0.39		q Q				
2+ 5	0.2698	0.40		qQ				
2+10	0.2713	0.41		qQ				
2+15	0.2718	0.42		qQ				
2+20	0.2718	0.42		qQ				
2+25	0.2718	0.42		qQ				
2+30	0.2718	0.42		qQ				
2+35	0.2960	0.45		q Q				
2+40	0.3274	0.48		q Q				
2+45	0.3346	0.49		q Q				
2+50	0.3378	0.51		q Q				
2+55	0.3393	0.52		q Q				
3+ 0	0.3398	0.52		q Q				
3+ 5	0.3398	0.53		q Q				
3+10	0.3398	0.53		q Q				
3+15	0.3398	0.53		q Q				
3+20	0.3398	0.53		q Q				
3+25	0.3398	0.53		q Q				
3+30	0.3398	0.53		q Q				
3+35	0.3398	0.53		q Q				
3+40	0.3398	0.53		q Q				
3+45	0.3398	0.53		q Q				
3+50	0.3639	0.56		q Q				
3+55	0.3954	0.59		q Q				
4+ 0	0.4026	0.60		q Q				

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4+ 5       0.4057      0.61  |   q Q   |         |         |         |
4+10       0.4072      0.62  |   q Q   |         |         |         |
4+15       0.4078      0.63  |   q  Q  |         |         |         |
4+20       0.4319      0.66  |   q  Q  |         |         |         |
4+25       0.4633      0.69  |    q Q  |         |         |         |
4+30       0.4706      0.70  |    q Q  |         |         |         |
4+35       0.4737      0.72  |    q  Q |         |         |         |
4+40       0.4752      0.73  |    q  Q |         |         |         |
4+45       0.4757      0.74  |    q  Q |         |         |         |
4+50       0.4998      0.76  |    q  Q |         |         |         |
4+55       0.5313      0.80  |    q  Q |         |         |         |
5+ 0       0.5385      0.81  |     q  Q|         |         |         |
5+ 5       0.4934      0.78  |    q  Q |         |         |         |
5+10       0.4320      0.72  |   q   Q |         |         |         |
5+15       0.4181      0.71  |   q  Q  |         |         |         |
5+20       0.4360      0.71  |   q  Q  |         |         |         |
5+25       0.4644      0.72  |    q  Q |         |         |         |
5+30       0.4706      0.72  |    q  Q |         |         |         |
5+35       0.4978      0.75  |    q  Q |         |         |         |
5+40       0.5307      0.79  |    q  Q |         |         |         |
5+45       0.5385      0.81  |     q  Q|         |         |         |
5+50       0.5416      0.82  |     q  Q|         |         |         |
5+55       0.5431      0.84  |     q  Q|         |         |         |
6+ 0       0.5437      0.84  |     q  Q|         |         |         |
6+ 5       0.5678      0.87  |     q  Q|         |         |         |
6+10       0.5993      0.90  |     q   Q         |         |         |
6+15       0.6065      0.92  |     q   Q         |         |         |
6+20       0.6096      0.93  |     q   Q         |         |         |
6+25       0.6111      0.94  |     q   Q         |         |         |
6+30       0.6116      0.95  |     q   Q         |         |         |
6+35       0.6358      0.98  |      q  Q         |         |         |
6+40       0.6672      1.01  |      q  |Q        |         |         |
6+45       0.6744      1.02  |      q  |Q        |         |         |
6+50       0.6776      1.04  |      q  |Q        |         |         |
6+55       0.6791      1.05  |      q  |Q        |         |         |
7+ 0       0.6796      1.06  |      q  |Q        |         |         |
7+ 5       0.6796      1.06  |      q  |Q        |         |         |
7+10       0.6796      1.06  |      q  |Q        |         |         |
7+15       0.6796      1.06  |      q  |Q        |         |         |
7+20       0.7037      1.09  |      q  | Q       |         |         |
7+25       0.7352      1.12  |       q | Q       |         |         |
7+30       0.7424      1.13  |       q | Q       |         |         |
7+35       0.7696      1.17  |       q |  Q      |         |         |
7+40       0.8026      1.21  |       q |  Q      |         |         |
7+45       0.8104      1.23  |        q|  Q      |         |         |
7+50       0.8376      1.27  |        q|   Q     |         |         |
7+55       0.8705      1.32  |        q|   Q     |         |         |
8+ 0       0.8783      1.34  |        q|   Q     |         |         |
8+ 5       0.9297      1.40  |         q    Q    |         |         |
8+10       0.9941      1.48  |         |q    Q   |         |         |
8+15       1.0091      1.51  |         |q    Q   |         |         |
8+20       1.0153      1.54  |         |q     Q  |         |         |
8+25       1.0183      1.57  |         |q     Q  |         |         |
8+30       1.0194      1.58  |         |q     Q  |         |         |
8+35       1.0435      1.61  |         |q      Q |         |         |
8+40       1.0750      1.65  |         | q     Q |         |         |
8+45       1.0822      1.66  |         | q     Q |         |         |
8+50       1.1094      1.70  |         | q     Q |         |         |
8+55       1.1424      1.74  |         | q      Q|         |         |
9+ 0       1.1502      1.76  |         | q      Q|         |         |
9+ 5       1.2015      1.83  |         |  q      Q         |         |
9+10       1.2659      1.90  |         |   q     |Q        |         |
9+15       1.2809      1.93  |         |   q     |Q        |         |
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9+20	1.3113	1.99		q	Q		
9+25	1.3457	2.05		q	Q		
9+30	1.3540	2.07		q	Q		
9+35	1.3813	2.12		q	Q		
9+40	1.4142	2.17		q	Q		
9+45	1.4220	2.19		q	Q		
9+50	1.4492	2.23		q	Q		
9+55	1.4822	2.27		q	Q		
10+ 0	1.4900	2.29		q	Q		
10+ 5	1.3242	2.14		q	Q		
10+10	1.1056	1.93		q	Q		
10+15	1.0555	1.86		q	Q		
10+20	1.0338	1.77		q	Q		
10+25	1.0232	1.69		q	Q		
10+30	1.0194	1.64		q	Q		
10+35	1.1400	1.74		q	Q		
10+40	1.2973	1.88		q	Q		
10+45	1.3334	1.93		q	Q		
10+50	1.3490	2.00		q	Q		
10+55	1.3565	2.06		q	Q		
11+ 0	1.3592	2.09		q	Q		
11+ 5	1.3351	2.09		q	Q		
11+10	1.3036	2.06		q	Q		
11+15	1.2964	2.06		q	Q		
11+20	1.2933	2.04		q	Q		
11+25	1.2918	2.03		q	Q		
11+30	1.2912	2.03		q	Q		
11+35	1.2430	1.97		q	Q		
11+40	1.1801	1.91		q	Q		
11+45	1.1657	1.89		q	Q		
11+50	1.1835	1.88		q	Q		
11+55	1.2120	1.89		q	Q		
12+ 0	1.2181	1.89		q	Q		
12+ 5	1.3901	2.06		q	Q		
12+10	1.6117	2.29		q	Q		
12+15	1.6629	2.38		q	Q		
12+20	1.7088	2.50		q	Q		
12+25	1.7508	2.62		q	Q		
12+30	1.7618	2.68		q	Q		
12+35	1.8132	2.76		q	Q		
12+40	1.8776	2.85		q	Q		
12+45	1.8926	2.89		q	Q		
12+50	1.9229	2.94		q	Q		
12+55	1.9574	3.00		q	Q		
13+ 0	1.9657	3.03		q	Q		
13+ 5	2.0894	3.17		q	Q		
13+10	2.2481	3.35		q	Q		
13+15	2.2848	3.41		q	Q		
13+20	2.3004	3.48		q	Q		
13+25	2.3079	3.54		q	Q		
13+30	2.3107	3.58		q	Q		
13+35	2.0453	3.33		q	Q		
13+40	1.6994	2.99		q	Q		
13+45	1.6199	2.87		q	Q		
13+50	1.5856	2.73		q	Q		
13+55	1.5691	2.59		q	Q		
14+ 0	1.5631	2.52		q	Q		
14+ 5	1.6596	2.58		q	Q		
14+10	1.7854	2.68		q	Q		
14+15	1.8143	2.72		q	Q		
14+20	1.8026	2.74		q	Q		
14+25	1.7772	2.76		q	Q		
14+30	1.7721	2.78		q	Q		

14+35	1.7690	2.78	|	| q	|	Q |
14+40	1.7675	2.77	|	| q	|	Q |
14+45	1.7670	2.77	|	| q	|	Q |
14+50	1.7428	2.74	|	| q	|	Q |
14+55	1.7114	2.71	|	| q	|	Q |
15+ 0	1.7042	2.70	|	| q	|	Q |
15+ 5	1.6769	2.66	|	| q	|	Q |
15+10	1.6440	2.61	|	| q	|	Q |
15+15	1.6362	2.60	|	| q	|	Q |
15+20	1.6090	2.56	|	| q	|	Q |
15+25	1.5760	2.51	|	| q	|	Q |
15+30	1.5683	2.49	|	| q	|	Q |
15+35	1.4687	2.38	|	| q	|	Q |
15+40	1.3414	2.24	|	| q	|	Q |
15+45	1.3119	2.18	|	| q	|	Q |
15+50	1.2994	2.13	|	| q	|	Q |
15+55	1.2934	2.08	|	| q	|	Q |
16+ 0	1.2912	2.05	|	| q	|	Q |
16+ 5	0.9294	1.67	|	| q	|	Q |
16+10	0.4577	1.19	|	| q	|	Q |
16+15	0.3493	1.01	|	| q	|	Q |
16+20	0.3026	0.81	|	| q	|	Q |
16+25	0.2800	0.63	|	| q	|	Q |
16+30	0.2718	0.53	|	| q	|	Q |
16+35	0.2477	0.45	|	| q	|	Q |
16+40	0.2163	0.39	|	| q	|	Q |
16+45	0.2090	0.37	|	| q	|	Q |
16+50	0.2059	0.35	|	| q	|	Q |
16+55	0.2044	0.33	|	| q	|	Q |
17+ 0	0.2039	0.33	|	| q	|	Q |
17+ 5	0.2521	0.37	|	| q	|	Q |
17+10	0.3150	0.43	|	| q	|	Q |
17+15	0.3295	0.45	|	| q	|	Q |
17+20	0.3357	0.48	|	| q	|	Q |
17+25	0.3387	0.50	|	| q	|	Q |
17+30	0.3398	0.52	|	| q	|	Q |
17+35	0.3398	0.52	|	| q	|	Q |
17+40	0.3398	0.53	|	| q	|	Q |
17+45	0.3398	0.53	|	| q	|	Q |
17+50	0.3157	0.51	|	| q	|	Q |
17+55	0.2842	0.48	|	| q	|	Q |
18+ 0	0.2770	0.46	|	| q	|	Q |
18+ 5	0.2739	0.45	|	| q	|	Q |
18+10	0.2724	0.44	|	| q	|	Q |
18+15	0.2718	0.43	|	| q	|	Q |
18+20	0.2718	0.43	|	| q	|	Q |
18+25	0.2718	0.43	|	| q	|	Q |
18+30	0.2718	0.43	|	| q	|	Q |
18+35	0.2477	0.40	|	| q	|	Q |
18+40	0.2163	0.37	|	| q	|	Q |
18+45	0.2090	0.36	|	| q	|	Q |
18+50	0.1818	0.32	|	| q	|	Q |
18+55	0.1489	0.28	|	| q	|	Q |
19+ 0	0.1411	0.26	|	| q	|	Q |
19+ 5	0.1621	0.27	|	| q	|	Q |
19+10	0.1920	0.28	|	| q	|	Q |
19+15	0.1987	0.29	|	| q	|	Q |
19+20	0.2260	0.32	|	| q	|	Q |
19+25	0.2589	0.36	|	| q	|	Q |
19+30	0.2667	0.38	|	| q	|	Q |
19+35	0.2457	0.37	|	| q	|	Q |
19+40	0.2157	0.35	|	| q	|	Q |
19+45	0.2090	0.35	|	| q	|	Q |

```
  19+50       0.1818      0.32  | qQ      |         |         |         |
  19+55       0.1489      0.28  |q Q      |         |         |         |
  20+ 0       0.1411      0.26  |qQ       |         |         |         |
  20+ 5       0.1621      0.27  |qQ       |         |         |         |
  20+10       0.1920      0.28  | qQ      |         |         |         |
  20+15       0.1987      0.29  | qQ      |         |         |         |
  20+20       0.2018      0.30  | qQ      |         |         |         |
  20+25       0.2033      0.31  | qQ      |         |         |         |
  20+30       0.2039      0.31  | qQ      |         |         |         |
  20+35       0.2039      0.32  | qQ      |         |         |         |
  20+40       0.2039      0.32  | qQ      |         |         |         |
  20+45       0.2039      0.32  | qQ      |         |         |         |
  20+50       0.1798      0.29  | qQ      |         |         |         |
  20+55       0.1483      0.26  |qQ       |         |         |         |
  21+ 0       0.1411      0.25  |qQ       |         |         |         |
  21+ 5       0.1621      0.26  |qQ       |         |         |         |
  21+10       0.1920      0.28  | qQ      |         |         |         |
  21+15       0.1987      0.29  | qQ      |         |         |         |
  21+20       0.1777      0.27  |q Q      |         |         |         |
  21+25       0.1478      0.25  |qQ       |         |         |         |
  21+30       0.1411      0.25  |qQ       |         |         |         |
  21+35       0.1621      0.26  |qQ       |         |         |         |
  21+40       0.1920      0.28  | qQ      |         |         |         |
  21+45       0.1987      0.29  | qQ      |         |         |         |
  21+50       0.1777      0.27  |q Q      |         |         |         |
  21+55       0.1478      0.25  |qQ       |         |         |         |
  22+ 0       0.1411      0.25  |qQ       |         |         |         |
  22+ 5       0.1621      0.26  |qQ       |         |         |         |
  22+10       0.1920      0.28  | qQ      |         |         |         |
  22+15       0.1987      0.29  | qQ      |         |         |         |
  22+20       0.1777      0.27  |q Q      |         |         |         |
  22+25       0.1478      0.25  |qQ       |         |         |         |
  22+30       0.1411      0.25  |qQ       |         |         |         |
  22+35       0.1380      0.24  |qQ       |         |         |         |
  22+40       0.1365      0.22  |qQ       |         |         |         |
  22+45       0.1359      0.22  |qQ       |         |         |         |
  22+50       0.1359      0.22  |qQ       |         |         |         |
  22+55       0.1359      0.21  |qQ       |         |         |         |
  23+ 0       0.1359      0.21  |qQ       |         |         |         |
  23+ 5       0.1359      0.21  |qQ       |         |         |         |
  23+10       0.1359      0.21  |qQ       |         |         |         |
  23+15       0.1359      0.21  |qQ       |         |         |         |
  23+20       0.1359      0.21  |qQ       |         |         |         |
  23+25       0.1359      0.21  |qQ       |         |         |         |
  23+30       0.1359      0.21  |qQ       |         |         |         |
  23+35       0.1359      0.21  |qQ       |         |         |         |
  23+40       0.1359      0.21  |qQ       |         |         |         |
  23+45       0.1359      0.21  |qQ       |         |         |         |
  23+50       0.1359      0.21  |qQ       |         |         |         |
  23+55       0.1359      0.21  |qQ       |         |         |         |
  24+ 0       0.1359      0.21  |qQ       |         |         |         |
  24+ 5       0.0877      0.16  qQ        |         |         |         |
  24+10       0.0248      0.10  qQ        |         |         |         |
  24+15       0.0103      0.08  Q         |         |         |         |
  24+20       0.0041      0.05  Q         |         |         |         |
  24+25       0.0011      0.03  Q         |         |         |         |
  24+30       0.0000      0.01  Q         |         |         |         |
  24+35       0.0000      0.01  Q         |         |         |         |
  24+40       0.0000      0.00  Q         |         |         |         |
--------------------------------------------------------------------------
       ***************************HYDROGRAPH DATA**************************
                    Number of intervals =   296
                    Time interval =    5.0 (Min.)
```

```
                Maximum/Peak flow rate =        3.580 (CFS)
                Total volume =       2.195 (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        2.460 to Point/Station        2.520
**** RETARDING BASIN ROUTING ****
_______________________________________________________________________________

User entry of depth-outflow-storage data
-------------------------------------------------------------------------
Total number of inflow hydrograph intervals = 296
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
  2.550      0.001      0.500     -0.001        0.003
  3.000      0.160      0.500      0.158        0.162
  4.000      0.540      0.500      0.538        0.542
  5.000      0.970      0.500      0.968        0.972
  6.000      1.440      0.500      1.438        1.442
  7.000      1.960      0.500      1.958        1.962
  7.500      2.240      0.500      2.238        2.242
  8.000      2.530     25.200      2.443        2.617
  9.000      3.140    128.900      2.696        3.584
-------------------------------------------------------------------------
                Hydrograph Detention Basin Routing
-------------------------------------------------------------------------

Graph values: 'I'= unit inflow; 'O'=outflow at time shown
-------------------------------------------------------------------------
 Time   Inflow  Outflow    Storage                                    Depth
(Hours)  (CFS)   (CFS)     (Ac.Ft) .0       0.9    1.79    2.69    3.58 (Ft.)
 0.083    0.05    0.03      0.000  O       |       |       |       |     0.16
 0.167    0.11    0.09      0.000  O       |       |       |       |     0.47
 0.250    0.13    0.13      0.000  |O      |       |       |       |     0.64
 0.333    0.16    0.14      0.000  |O      |       |       |       |     0.74
 0.417    0.19    0.18      0.000  |O      |       |       |       |     0.93
 0.500    0.21    0.21      0.000  |O      |       |       |       |     1.07
 0.583    0.26    0.25      0.000  | O     |       |       |       |     1.26
 0.667    0.29    0.29      0.001  | O     |       |       |       |     1.47
 0.750    0.31    0.31      0.001  | O     |       |       |       |     1.56
 0.833    0.34    0.33      0.001  | OI    |       |       |       |     1.68
 0.917    0.37    0.36      0.001  |  O    |       |       |       |     1.85
 1.000    0.39    0.38      0.001  |  O    |       |       |       |     1.96
 1.083    0.38    0.38      0.001  |  O    |       |       |       |     1.93
```

1.167	0.36	0.36	0.001	O				1.84
1.250	0.35	0.35	0.001	O				1.79
1.333	0.34	0.35	0.001	O				1.76
1.417	0.33	0.33	0.001	O				1.70
1.500	0.33	0.33	0.001	O				1.67
1.583	0.32	0.32	0.001	O				1.65
1.667	0.32	0.32	0.001	O				1.64
1.750	0.32	0.32	0.001	O				1.63
1.833	0.34	0.33	0.001	OI				1.71
1.917	0.37	0.37	0.001	O				1.86
2.000	0.39	0.38	0.001	O				1.96
2.083	0.40	0.39	0.001	O				2.01
2.167	0.41	0.41	0.001	O				2.08
2.250	0.42	0.42	0.001	O				2.13
2.333	0.42	0.42	0.001	O				2.15
2.417	0.42	0.42	0.001	O				2.16
2.500	0.42	0.42	0.001	O				2.16
2.583	0.45	0.44	0.001	OI				2.24
2.667	0.48	0.47	0.001	O				2.41
2.750	0.49	0.49	0.001	O				2.50
2.833	0.51	0.50	0.001	O				2.55
2.917	0.52	0.50	0.001	O				2.55
3.000	0.52	0.50	0.001	O				2.55
3.083	0.53	0.50	0.001	O				2.55
3.167	0.53	0.50	0.002	O				2.55
3.250	0.53	0.50	0.002	O				2.55
3.333	0.53	0.50	0.002	O				2.55
3.417	0.53	0.50	0.002	O				2.55
3.500	0.53	0.50	0.002	O				2.55
3.583	0.53	0.50	0.003	O				2.55
3.667	0.53	0.50	0.003	O				2.56
3.750	0.53	0.50	0.003	O				2.56
3.833	0.56	0.50	0.003	O				2.56
3.917	0.59	0.50	0.004	OI				2.56
4.000	0.60	0.50	0.005	OI				2.56
4.083	0.61	0.50	0.005	OI				2.56
4.167	0.62	0.50	0.006	OI				2.56
4.250	0.63	0.50	0.007	OI				2.57
4.333	0.66	0.50	0.008	OI				2.57
4.417	0.69	0.50	0.009	O I				2.57
4.500	0.70	0.50	0.011	O I				2.58
4.583	0.72	0.50	0.012	O I				2.58
4.667	0.73	0.50	0.014	O I				2.59
4.750	0.74	0.50	0.015	O I				2.59
4.833	0.76	0.50	0.017	O I				2.59
4.917	0.80	0.50	0.019	O I				2.60
5.000	0.81	0.50	0.021	O I				2.61
5.083	0.78	0.50	0.023	O I				2.61
5.167	0.72	0.50	0.025	O I				2.62
5.250	0.71	0.50	0.026	O I				2.62
5.333	0.71	0.50	0.028	O I				2.63
5.417	0.72	0.50	0.029	O I				2.63
5.500	0.72	0.50	0.031	O I				2.63
5.583	0.75	0.50	0.032	O I				2.64
5.667	0.79	0.50	0.034	O I				2.64
5.750	0.81	0.50	0.036	O I				2.65
5.833	0.82	0.50	0.038	O I				2.66
5.917	0.84	0.50	0.041	O I				2.66
6.000	0.84	0.50	0.043	O I				2.67
6.083	0.87	0.50	0.045	O I				2.68
6.167	0.90	0.50	0.048	O I				2.68
6.250	0.92	0.50	0.051	O I				2.69
6.333	0.93	0.50	0.054	O I				2.70

6.417	0.94	0.50	0.057	O	I			2.71
6.500	0.95	0.50	0.060	O	I			2.72
6.583	0.98	0.50	0.063	O	I			2.73
6.667	1.01	0.50	0.066	O	I			2.74
6.750	1.02	0.50	0.070	O	I			2.75
6.833	1.04	0.50	0.074	O	I			2.76
6.917	1.05	0.50	0.077	O	I			2.77
7.000	1.06	0.50	0.081	O	I			2.78
7.083	1.06	0.50	0.085	O	I			2.79
7.167	1.06	0.50	0.089	O	I			2.80
7.250	1.06	0.50	0.093	O	I			2.81
7.333	1.09	0.50	0.097	O	I			2.82
7.417	1.12	0.50	0.101	O	I			2.83
7.500	1.13	0.50	0.105	O	I			2.84
7.583	1.17	0.50	0.110	O	I			2.86
7.667	1.21	0.50	0.114	O	I			2.87
7.750	1.23	0.50	0.119	O	I			2.88
7.833	1.27	0.50	0.125	O	I			2.90
7.917	1.32	0.50	0.130	O	I			2.92
8.000	1.34	0.50	0.136	O	I			2.93
8.083	1.40	0.50	0.142	O	I			2.95
8.167	1.48	0.50	0.148	O	I			2.97
8.250	1.51	0.50	0.155	O	I			2.99
8.333	1.54	0.50	0.162	O	I			3.01
8.417	1.57	0.50	0.169	O	I			3.02
8.500	1.58	0.50	0.177	O	I			3.04
8.583	1.61	0.50	0.184	O	I			3.06
8.667	1.65	0.50	0.192	O	I			3.08
8.750	1.66	0.50	0.200	O	I			3.11
8.833	1.70	0.50	0.208	O	I			3.13
8.917	1.74	0.50	0.216	O	I			3.15
9.000	1.76	0.50	0.225	O	I			3.17
9.083	1.83	0.50	0.234	O	I			3.19
9.167	1.90	0.50	0.243	O	I			3.22
9.250	1.93	0.50	0.253	O	I			3.25
9.333	1.99	0.50	0.263	O	I			3.27
9.417	2.05	0.50	0.274	O	I			3.30
9.500	2.07	0.50	0.284	O	I			3.33
9.583	2.12	0.50	0.295	O	I			3.36
9.667	2.17	0.50	0.307	O	I			3.39
9.750	2.19	0.50	0.318	O	I			3.42
9.833	2.23	0.50	0.330	O	I			3.45
9.917	2.27	0.50	0.342	O	I			3.48
10.000	2.29	0.50	0.354	O	I			3.51
10.083	2.14	0.50	0.366	O	I			3.54
10.167	1.93	0.50	0.377	O	I			3.57
10.250	1.86	0.50	0.386	O	I			3.60
10.333	1.77	0.50	0.395	O	I			3.62
10.417	1.69	0.50	0.404	O	I			3.64
10.500	1.64	0.50	0.412	O	I			3.66
10.583	1.74	0.50	0.420	O	I			3.68
10.667	1.88	0.50	0.429	O	I			3.71
10.750	1.93	0.50	0.439	O	I			3.73
10.833	2.00	0.50	0.449	O	I			3.76
10.917	2.06	0.50	0.459	O	I			3.79
11.000	2.09	0.50	0.470	O	I			3.82
11.083	2.09	0.50	0.481	O	I			3.85
11.167	2.06	0.50	0.492	O	I			3.87
11.250	2.06	0.50	0.503	O	I			3.90
11.333	2.04	0.50	0.513	O	I			3.93
11.417	2.03	0.50	0.524	O	I			3.96
11.500	2.03	0.50	0.535	O	I			3.99
11.583	1.97	0.50	0.545	O	I			4.01

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11.667    1.91    0.50      0.555  |   O   |       |I      |       |     4.03
11.750    1.89    0.50      0.564  |   O   |       I       |       |     4.06
11.833    1.88    0.50      0.574  |   O   |       I       |       |     4.08
11.917    1.89    0.50      0.584  |   O   |       I       |       |     4.10
12.000    1.89    0.50      0.593  |   O   |       I       |       |     4.12
12.083    2.06    0.50      0.603  |   O   |       | I     |       |     4.15
12.167    2.29    0.50      0.615  |   O   |       |   I   |       |     4.17
12.250    2.38    0.50      0.628  |   O   |       |    I  |       |     4.20
12.333    2.50    0.50      0.641  |   O   |       |     I |       |     4.23
12.417    2.62    0.50      0.655  |   O   |       |      I|       |     4.27
12.500    2.68    0.50      0.670  |   O   |       |      I|       |     4.30
12.583    2.76    0.50      0.685  |   O   |       |       I       |     4.34
12.667    2.85    0.50      0.701  |   O   |       |       |I      |     4.37
12.750    2.89    0.50      0.717  |   O   |       |       |I      |     4.41
12.833    2.94    0.50      0.734  |   O   |       |       | I     |     4.45
12.917    3.00    0.50      0.751  |   O   |       |       | I     |     4.49
13.000    3.03    0.50      0.768  |   O   |       |       |  I    |     4.53
13.083    3.17    0.50      0.786  |   O   |       |       |   I   |     4.57
13.167    3.35    0.50      0.805  |   O   |       |       |    I  |     4.62
13.250    3.41    0.50      0.825  |   O   |       |       |     I |     4.66
13.333    3.48    0.50      0.845  |   O   |       |       |      I|     4.71
13.417    3.54    0.50      0.866  |   O   |       |       |      I|     4.76
13.500    3.58    0.50      0.887  |   O   |       |       |       I     4.81
13.583    3.33    0.50      0.908  |   O   |       |       |    I  |     4.85
13.667    2.99    0.50      0.926  |   O   |       |       | I     |     4.90
13.750    2.87    0.50      0.943  |   O   |       |       |I      |     4.94
13.833    2.73    0.50      0.958  |   O   |       |       I       |     4.97
13.917    2.59    0.50      0.973  |   O   |       |      I|       |     5.01
14.000    2.52    0.50      0.987  |   O   |       |     I |       |     5.04
14.083    2.58    0.50      1.002  |   O   |       |      I|       |     5.07
14.167    2.68    0.50      1.016  |   O   |       |      I|       |     5.10
14.250    2.72    0.50      1.031  |   O   |       |       I       |     5.13
14.333    2.74    0.50      1.047  |   O   |       |       I       |     5.16
14.417    2.76    0.50      1.062  |   O   |       |       I       |     5.20
14.500    2.78    0.50      1.078  |   O   |       |       I       |     5.23
14.583    2.78    0.50      1.094  |   O   |       |       I       |     5.26
14.667    2.77    0.50      1.109  |   O   |       |       I       |     5.30
14.750    2.77    0.50      1.125  |   O   |       |       I       |     5.33
14.833    2.74    0.50      1.140  |   O   |       |       I       |     5.36
14.917    2.71    0.50      1.156  |   O   |       |       I       |     5.40
15.000    2.70    0.50      1.171  |   O   |       |       I       |     5.43
15.083    2.66    0.50      1.186  |   O   |       |      I|       |     5.46
15.167    2.61    0.50      1.201  |   O   |       |      I|       |     5.49
15.250    2.60    0.50      1.215  |   O   |       |      I|       |     5.52
15.333    2.56    0.50      1.229  |   O   |       |     I |       |     5.55
15.417    2.51    0.50      1.243  |   O   |       |     I |       |     5.58
15.500    2.49    0.50      1.257  |   O   |       |     I |       |     5.61
15.583    2.38    0.50      1.271  |   O   |       |    I  |       |     5.64
15.667    2.24    0.50      1.283  |   O   |       |  I    |       |     5.67
15.750    2.18    0.50      1.295  |   O   |       |  I    |       |     5.69
15.833    2.13    0.50      1.306  |   O   |       |  I    |       |     5.72
15.917    2.08    0.50      1.317  |   O   |       | I     |       |     5.74
16.000    2.05    0.50      1.328  |   O   |       | I     |       |     5.76
16.083    1.67    0.50      1.337  |   O   |     I |       |       |     5.78
16.167    1.19    0.50      1.344  |   O   | I     |       |       |     5.80
16.250    1.01    0.50      1.348  |   O   |I      |       |       |     5.80
16.333    0.81    0.50      1.351  |   O  I|       |       |       |     5.81
16.417    0.63    0.50      1.352  |   OI  |       |       |       |     5.81
16.500    0.53    0.50      1.353  |   O   |       |       |       |     5.81
16.583    0.45    0.50      1.353  |   O   |       |       |       |     5.81
16.667    0.39    0.50      1.352  |  IO   |       |       |       |     5.81
16.750    0.37    0.50      1.351  |  IO   |       |       |       |     5.81
16.833    0.35    0.50      1.350  |  IO   |       |       |       |     5.81
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16.917	0.33	0.50	1.349	I O				5.81
17.000	0.33	0.50	1.348	I O				5.80
17.083	0.37	0.50	1.347	IO				5.80
17.167	0.43	0.50	1.346	IO				5.80
17.250	0.45	0.50	1.346	O				5.80
17.333	0.48	0.50	1.346	O				5.80
17.417	0.50	0.50	1.346	O				5.80
17.500	0.52	0.50	1.346	O				5.80
17.583	0.52	0.50	1.346	O				5.80
17.667	0.53	0.50	1.346	O				5.80
17.750	0.53	0.50	1.346	O				5.80
17.833	0.51	0.50	1.346	O				5.80
17.917	0.48	0.50	1.346	O				5.80
18.000	0.46	0.50	1.346	O				5.80
18.083	0.45	0.50	1.346	O				5.80
18.167	0.44	0.50	1.345	IO				5.80
18.250	0.43	0.50	1.345	IO				5.80
18.333	0.43	0.50	1.344	IO				5.80
18.417	0.43	0.50	1.344	IO				5.80
18.500	0.43	0.50	1.343	IO				5.79
18.583	0.40	0.50	1.343	IO				5.79
18.667	0.37	0.50	1.342	IO				5.79
18.750	0.36	0.50	1.341	IO				5.79
18.833	0.32	0.50	1.340	I O				5.79
18.917	0.28	0.50	1.339	I O				5.78
19.000	0.26	0.50	1.337	I O				5.78
19.083	0.27	0.50	1.335	I O				5.78
19.167	0.28	0.50	1.334	I O				5.77
19.250	0.29	0.50	1.332	I O				5.77
19.333	0.32	0.50	1.331	I O				5.77
19.417	0.36	0.50	1.330	IO				5.77
19.500	0.38	0.50	1.329	IO				5.76
19.583	0.37	0.50	1.328	IO				5.76
19.667	0.35	0.50	1.327	IO				5.76
19.750	0.35	0.50	1.326	IO				5.76
19.833	0.32	0.50	1.325	I O				5.76
19.917	0.28	0.50	1.324	I O				5.75
20.000	0.26	0.50	1.322	I O				5.75
20.083	0.27	0.50	1.320	I O				5.75
20.167	0.28	0.50	1.319	I O				5.74
20.250	0.29	0.50	1.317	I O				5.74
20.333	0.30	0.50	1.316	I O				5.74
20.417	0.31	0.50	1.315	I O				5.73
20.500	0.31	0.50	1.313	I O				5.73
20.583	0.32	0.50	1.312	I O				5.73
20.667	0.32	0.50	1.311	I O				5.72
20.750	0.32	0.50	1.309	I O				5.72
20.833	0.29	0.50	1.308	I O				5.72
20.917	0.26	0.50	1.307	I O				5.72
21.000	0.25	0.50	1.305	I O				5.71
21.083	0.26	0.50	1.303	I O				5.71
21.167	0.28	0.50	1.302	I O				5.71
21.250	0.29	0.50	1.300	I O				5.70
21.333	0.27	0.50	1.299	I O				5.70
21.417	0.25	0.50	1.297	I O				5.70
21.500	0.25	0.50	1.295	I O				5.69
21.583	0.26	0.50	1.294	I O				5.69
21.667	0.28	0.50	1.292	I O				5.69
21.750	0.29	0.50	1.291	I O				5.68
21.833	0.27	0.50	1.289	I O				5.68
21.917	0.25	0.50	1.287	I O				5.68
22.000	0.25	0.50	1.286	I O				5.67
22.083	0.26	0.50	1.284	I O				5.67

22.167	0.28	0.50	1.282	| I	O	|	|	|	5.66
22.250	0.29	0.50	1.281	| I	O	|	|	|	5.66
22.333	0.27	0.50	1.279	| I	O	|	|	|	5.66
22.417	0.25	0.50	1.278	| I	O	|	|	|	5.65
22.500	0.25	0.50	1.276	| I	O	|	|	|	5.65
22.583	0.24	0.50	1.274	| I	O	|	|	|	5.65
22.667	0.22	0.50	1.272	| I	O	|	|	|	5.64
22.750	0.22	0.50	1.270	|I	O	|	|	|	5.64
22.833	0.22	0.50	1.268	|I	O	|	|	|	5.63
22.917	0.21	0.50	1.266	|I	O	|	|	|	5.63
23.000	0.21	0.50	1.264	|I	O	|	|	|	5.63
23.083	0.21	0.50	1.263	|I	O	|	|	|	5.62
23.167	0.21	0.50	1.261	|I	O	|	|	|	5.62
23.250	0.21	0.50	1.259	|I	O	|	|	|	5.61
23.333	0.21	0.50	1.257	|I	O	|	|	|	5.61
23.417	0.21	0.50	1.255	|I	O	|	|	|	5.61
23.500	0.21	0.50	1.253	|I	O	|	|	|	5.60
23.583	0.21	0.50	1.251	|I	O	|	|	|	5.60
23.667	0.21	0.50	1.249	|I	O	|	|	|	5.59
23.750	0.21	0.50	1.247	|I	O	|	|	|	5.59
23.833	0.21	0.50	1.245	|I	O	|	|	|	5.58
23.917	0.21	0.50	1.243	|I	O	|	|	|	5.58
24.000	0.21	0.50	1.241	|I	O	|	|	|	5.58
24.083	0.16	0.50	1.239	|I	O	|	|	|	5.57
24.167	0.10	0.50	1.236	I	O	|	|	|	5.57
24.250	0.08	0.50	1.233	I	O	|	|	|	5.56
24.333	0.05	0.50	1.230	I	O	|	|	|	5.55
24.417	0.03	0.50	1.227	I	O	|	|	|	5.55
24.500	0.01	0.50	1.224	I	O	|	|	|	5.54
24.583	0.01	0.50	1.220	I	O	|	|	|	5.53
24.667	0.00	0.50	1.217	I	O	|	|	|	5.53
24.750	0.00	0.50	1.214	I	O	|	|	|	5.52
24.833	0.00	0.50	1.210	I	O	|	|	|	5.51
24.917	0.00	0.50	1.207	I	O	|	|	|	5.50
25.000	0.00	0.50	1.203	I	O	|	|	|	5.50
25.083	0.00	0.50	1.200	I	O	|	|	|	5.49
25.167	0.00	0.50	1.196	I	O	|	|	|	5.48
25.250	0.00	0.50	1.193	I	O	|	|	|	5.47
25.333	0.00	0.50	1.189	I	O	|	|	|	5.47
25.417	0.00	0.50	1.186	I	O	|	|	|	5.46
25.500	0.00	0.50	1.183	I	O	|	|	|	5.45
25.583	0.00	0.50	1.179	I	O	|	|	|	5.44
25.667	0.00	0.50	1.176	I	O	|	|	|	5.44
25.750	0.00	0.50	1.172	I	O	|	|	|	5.43
25.833	0.00	0.50	1.169	I	O	|	|	|	5.42
25.917	0.00	0.50	1.165	I	O	|	|	|	5.42
26.000	0.00	0.50	1.162	I	O	|	|	|	5.41
26.083	0.00	0.50	1.158	I	O	|	|	|	5.40
26.167	0.00	0.50	1.155	I	O	|	|	|	5.39
26.250	0.00	0.50	1.152	I	O	|	|	|	5.39
26.333	0.00	0.50	1.148	I	O	|	|	|	5.38
26.417	0.00	0.50	1.145	I	O	|	|	|	5.37
26.500	0.00	0.50	1.141	I	O	|	|	|	5.36
26.583	0.00	0.50	1.138	I	O	|	|	|	5.36
26.667	0.00	0.50	1.134	I	O	|	|	|	5.35
26.750	0.00	0.50	1.131	I	O	|	|	|	5.34
26.833	0.00	0.50	1.127	I	O	|	|	|	5.34
26.917	0.00	0.50	1.124	I	O	|	|	|	5.33
27.000	0.00	0.50	1.121	I	O	|	|	|	5.32
27.083	0.00	0.50	1.117	I	O	|	|	|	5.31
27.167	0.00	0.50	1.114	I	O	|	|	|	5.31
27.250	0.00	0.50	1.110	I	O	|	|	|	5.30
27.333	0.00	0.50	1.107	I	O	|	|	|	5.29

27.417	0.00	0.50	1.103	I	O	|	|	|	|	5.28
27.500	0.00	0.50	1.100	I	O	|	|	|	|	5.28
27.583	0.00	0.50	1.096	I	O	|	|	|	|	5.27
27.667	0.00	0.50	1.093	I	O	|	|	|	|	5.26
27.750	0.00	0.50	1.090	I	O	|	|	|	|	5.25
27.833	0.00	0.50	1.086	I	O	|	|	|	|	5.25
27.917	0.00	0.50	1.083	I	O	|	|	|	|	5.24
28.000	0.00	0.50	1.079	I	O	|	|	|	|	5.23
28.083	0.00	0.50	1.076	I	O	|	|	|	|	5.23
28.167	0.00	0.50	1.072	I	O	|	|	|	|	5.22
28.250	0.00	0.50	1.069	I	O	|	|	|	|	5.21
28.333	0.00	0.50	1.065	I	O	|	|	|	|	5.20
28.417	0.00	0.50	1.062	I	O	|	|	|	|	5.20
28.500	0.00	0.50	1.059	I	O	|	|	|	|	5.19
28.583	0.00	0.50	1.055	I	O	|	|	|	|	5.18
28.667	0.00	0.50	1.052	I	O	|	|	|	|	5.17
28.750	0.00	0.50	1.048	I	O	|	|	|	|	5.17
28.833	0.00	0.50	1.045	I	O	|	|	|	|	5.16
28.917	0.00	0.50	1.041	I	O	|	|	|	|	5.15
29.000	0.00	0.50	1.038	I	O	|	|	|	|	5.14
29.083	0.00	0.50	1.034	I	O	|	|	|	|	5.14
29.167	0.00	0.50	1.031	I	O	|	|	|	|	5.13
29.250	0.00	0.50	1.028	I	O	|	|	|	|	5.12
29.333	0.00	0.50	1.024	I	O	|	|	|	|	5.12
29.417	0.00	0.50	1.021	I	O	|	|	|	|	5.11
29.500	0.00	0.50	1.017	I	O	|	|	|	|	5.10
29.583	0.00	0.50	1.014	I	O	|	|	|	|	5.09
29.667	0.00	0.50	1.010	I	O	|	|	|	|	5.09
29.750	0.00	0.50	1.007	I	O	|	|	|	|	5.08
29.833	0.00	0.50	1.003	I	O	|	|	|	|	5.07
29.917	0.00	0.50	1.000	I	O	|	|	|	|	5.06
30.000	0.00	0.50	0.997	I	O	|	|	|	|	5.06
30.083	0.00	0.50	0.993	I	O	|	|	|	|	5.05
30.167	0.00	0.50	0.990	I	O	|	|	|	|	5.04
30.250	0.00	0.50	0.986	I	O	|	|	|	|	5.03
30.333	0.00	0.50	0.983	I	O	|	|	|	|	5.03
30.417	0.00	0.50	0.979	I	O	|	|	|	|	5.02
30.500	0.00	0.50	0.976	I	O	|	|	|	|	5.01
30.583	0.00	0.50	0.972	I	O	|	|	|	|	5.01
30.667	0.00	0.50	0.969	I	O	|	|	|	|	5.00
30.750	0.00	0.50	0.966	I	O	|	|	|	|	4.99
30.833	0.00	0.50	0.962	I	O	|	|	|	|	4.98
30.917	0.00	0.50	0.959	I	O	|	|	|	|	4.97
31.000	0.00	0.50	0.955	I	O	|	|	|	|	4.97
31.083	0.00	0.50	0.952	I	O	|	|	|	|	4.96
31.167	0.00	0.50	0.948	I	O	|	|	|	|	4.95
31.250	0.00	0.50	0.945	I	O	|	|	|	|	4.94
31.333	0.00	0.50	0.942	I	O	|	|	|	|	4.93
31.417	0.00	0.50	0.938	I	O	|	|	|	|	4.93
31.500	0.00	0.50	0.935	I	O	|	|	|	|	4.92
31.583	0.00	0.50	0.931	I	O	|	|	|	|	4.91
31.667	0.00	0.50	0.928	I	O	|	|	|	|	4.90
31.750	0.00	0.50	0.924	I	O	|	|	|	|	4.89
31.833	0.00	0.50	0.921	I	O	|	|	|	|	4.89
31.917	0.00	0.50	0.917	I	O	|	|	|	|	4.88
32.000	0.00	0.50	0.914	I	O	|	|	|	|	4.87
32.083	0.00	0.50	0.911	I	O	|	|	|	|	4.86
32.167	0.00	0.50	0.907	I	O	|	|	|	|	4.85
32.250	0.00	0.50	0.904	I	O	|	|	|	|	4.85
32.333	0.00	0.50	0.900	I	O	|	|	|	|	4.84
32.417	0.00	0.50	0.897	I	O	|	|	|	|	4.83
32.500	0.00	0.50	0.893	I	O	|	|	|	|	4.82
32.583	0.00	0.50	0.890	I	O	|	|	|	|	4.81

32.667	0.00	0.50	0.886	I	O	|	|	|	4.81
32.750	0.00	0.50	0.883	I	O	|	|	|	4.80
32.833	0.00	0.50	0.880	I	O	|	|	|	4.79
32.917	0.00	0.50	0.876	I	O	|	|	|	4.78
33.000	0.00	0.50	0.873	I	O	|	|	|	4.77
33.083	0.00	0.50	0.869	I	O	|	|	|	4.77
33.167	0.00	0.50	0.866	I	O	|	|	|	4.76
33.250	0.00	0.50	0.862	I	O	|	|	|	4.75
33.333	0.00	0.50	0.859	I	O	|	|	|	4.74
33.417	0.00	0.50	0.855	I	O	|	|	|	4.73
33.500	0.00	0.50	0.852	I	O	|	|	|	4.73
33.583	0.00	0.50	0.849	I	O	|	|	|	4.72
33.667	0.00	0.50	0.845	I	O	|	|	|	4.71
33.750	0.00	0.50	0.842	I	O	|	|	|	4.70
33.833	0.00	0.50	0.838	I	O	|	|	|	4.69
33.917	0.00	0.50	0.835	I	O	|	|	|	4.69
34.000	0.00	0.50	0.831	I	O	|	|	|	4.68
34.083	0.00	0.50	0.828	I	O	|	|	|	4.67
34.167	0.00	0.50	0.824	I	O	|	|	|	4.66
34.250	0.00	0.50	0.821	I	O	|	|	|	4.65
34.333	0.00	0.50	0.818	I	O	|	|	|	4.65
34.417	0.00	0.50	0.814	I	O	|	|	|	4.64
34.500	0.00	0.50	0.811	I	O	|	|	|	4.63
34.583	0.00	0.50	0.807	I	O	|	|	|	4.62
34.667	0.00	0.50	0.804	I	O	|	|	|	4.61
34.750	0.00	0.50	0.800	I	O	|	|	|	4.61
34.833	0.00	0.50	0.797	I	O	|	|	|	4.60
34.917	0.00	0.50	0.793	I	O	|	|	|	4.59
35.000	0.00	0.50	0.790	I	O	|	|	|	4.58
35.083	0.00	0.50	0.787	I	O	|	|	|	4.57
35.167	0.00	0.50	0.783	I	O	|	|	|	4.57
35.250	0.00	0.50	0.780	I	O	|	|	|	4.56
35.333	0.00	0.50	0.776	I	O	|	|	|	4.55
35.417	0.00	0.50	0.773	I	O	|	|	|	4.54
35.500	0.00	0.50	0.769	I	O	|	|	|	4.53
35.583	0.00	0.50	0.766	I	O	|	|	|	4.53
35.667	0.00	0.50	0.762	I	O	|	|	|	4.52
35.750	0.00	0.50	0.759	I	O	|	|	|	4.51
35.833	0.00	0.50	0.756	I	O	|	|	|	4.50
35.917	0.00	0.50	0.752	I	O	|	|	|	4.49
36.000	0.00	0.50	0.749	I	O	|	|	|	4.49
36.083	0.00	0.50	0.745	I	O	|	|	|	4.48
36.167	0.00	0.50	0.742	I	O	|	|	|	4.47
36.250	0.00	0.50	0.738	I	O	|	|	|	4.46
36.333	0.00	0.50	0.735	I	O	|	|	|	4.45
36.417	0.00	0.50	0.731	I	O	|	|	|	4.45
36.500	0.00	0.50	0.728	I	O	|	|	|	4.44
36.583	0.00	0.50	0.725	I	O	|	|	|	4.43
36.667	0.00	0.50	0.721	I	O	|	|	|	4.42
36.750	0.00	0.50	0.718	I	O	|	|	|	4.41
36.833	0.00	0.50	0.714	I	O	|	|	|	4.41
36.917	0.00	0.50	0.711	I	O	|	|	|	4.40
37.000	0.00	0.50	0.707	I	O	|	|	|	4.39
37.083	0.00	0.50	0.704	I	O	|	|	|	4.38
37.167	0.00	0.50	0.700	I	O	|	|	|	4.37
37.250	0.00	0.50	0.697	I	O	|	|	|	4.37
37.333	0.00	0.50	0.694	I	O	|	|	|	4.36
37.417	0.00	0.50	0.690	I	O	|	|	|	4.35
37.500	0.00	0.50	0.687	I	O	|	|	|	4.34
37.583	0.00	0.50	0.683	I	O	|	|	|	4.33
37.667	0.00	0.50	0.680	I	O	|	|	|	4.33
37.750	0.00	0.50	0.676	I	O	|	|	|	4.32
37.833	0.00	0.50	0.673	I	O	|	|	|	4.31

37.917	0.00	0.50	0.669	I	O	|	|	|	4.30
38.000	0.00	0.50	0.666	I	O	|	|	|	4.29
38.083	0.00	0.50	0.663	I	O	|	|	|	4.29
38.167	0.00	0.50	0.659	I	O	|	|	|	4.28
38.250	0.00	0.50	0.656	I	O	|	|	|	4.27
38.333	0.00	0.50	0.652	I	O	|	|	|	4.26
38.417	0.00	0.50	0.649	I	O	|	|	|	4.25
38.500	0.00	0.50	0.645	I	O	|	|	|	4.25
38.583	0.00	0.50	0.642	I	O	|	|	|	4.24
38.667	0.00	0.50	0.638	I	O	|	|	|	4.23
38.750	0.00	0.50	0.635	I	O	|	|	|	4.22
38.833	0.00	0.50	0.632	I	O	|	|	|	4.21
38.917	0.00	0.50	0.628	I	O	|	|	|	4.20
39.000	0.00	0.50	0.625	I	O	|	|	|	4.20
39.083	0.00	0.50	0.621	I	O	|	|	|	4.19
39.167	0.00	0.50	0.618	I	O	|	|	|	4.18
39.250	0.00	0.50	0.614	I	O	|	|	|	4.17
39.333	0.00	0.50	0.611	I	O	|	|	|	4.16
39.417	0.00	0.50	0.607	I	O	|	|	|	4.16
39.500	0.00	0.50	0.604	I	O	|	|	|	4.15
39.583	0.00	0.50	0.601	I	O	|	|	|	4.14
39.667	0.00	0.50	0.597	I	O	|	|	|	4.13
39.750	0.00	0.50	0.594	I	O	|	|	|	4.12
39.833	0.00	0.50	0.590	I	O	|	|	|	4.12
39.917	0.00	0.50	0.587	I	O	|	|	|	4.11
40.000	0.00	0.50	0.583	I	O	|	|	|	4.10
40.083	0.00	0.50	0.580	I	O	|	|	|	4.09
40.167	0.00	0.50	0.576	I	O	|	|	|	4.08
40.250	0.00	0.50	0.573	I	O	|	|	|	4.08
40.333	0.00	0.50	0.570	I	O	|	|	|	4.07
40.417	0.00	0.50	0.566	I	O	|	|	|	4.06
40.500	0.00	0.50	0.563	I	O	|	|	|	4.05
40.583	0.00	0.50	0.559	I	O	|	|	|	4.04
40.667	0.00	0.50	0.556	I	O	|	|	|	4.04
40.750	0.00	0.50	0.552	I	O	|	|	|	4.03
40.833	0.00	0.50	0.549	I	O	|	|	|	4.02
40.917	0.00	0.50	0.545	I	O	|	|	|	4.01
41.000	0.00	0.50	0.542	I	O	|	|	|	4.00
41.083	0.00	0.50	0.539	I	O	|	|	|	4.00
41.167	0.00	0.50	0.535	I	O	|	|	|	3.99
41.250	0.00	0.50	0.532	I	O	|	|	|	3.98
41.333	0.00	0.50	0.528	I	O	|	|	|	3.97
41.417	0.00	0.50	0.525	I	O	|	|	|	3.96
41.500	0.00	0.50	0.521	I	O	|	|	|	3.95
41.583	0.00	0.50	0.518	I	O	|	|	|	3.94
41.667	0.00	0.50	0.515	I	O	|	|	|	3.93
41.750	0.00	0.50	0.511	I	O	|	|	|	3.92
41.833	0.00	0.50	0.508	I	O	|	|	|	3.91
41.917	0.00	0.50	0.504	I	O	|	|	|	3.91
42.000	0.00	0.50	0.501	I	O	|	|	|	3.90
42.083	0.00	0.50	0.497	I	O	|	|	|	3.89
42.167	0.00	0.50	0.494	I	O	|	|	|	3.88
42.250	0.00	0.50	0.490	I	O	|	|	|	3.87
42.333	0.00	0.50	0.487	I	O	|	|	|	3.86
42.417	0.00	0.50	0.484	I	O	|	|	|	3.85
42.500	0.00	0.50	0.480	I	O	|	|	|	3.84
42.583	0.00	0.50	0.477	I	O	|	|	|	3.83
42.667	0.00	0.50	0.473	I	O	|	|	|	3.82
42.750	0.00	0.50	0.470	I	O	|	|	|	3.82
42.833	0.00	0.50	0.466	I	O	|	|	|	3.81
42.917	0.00	0.50	0.463	I	O	|	|	|	3.80
43.000	0.00	0.50	0.459	I	O	|	|	|	3.79
43.083	0.00	0.50	0.456	I	O	|	|	|	3.78

43.167	0.00	0.50	0.453	I	O	|	|	|	|	3.77
43.250	0.00	0.50	0.449	I	O	|	|	|	|	3.76
43.333	0.00	0.50	0.446	I	O	|	|	|	|	3.75
43.417	0.00	0.50	0.442	I	O	|	|	|	|	3.74
43.500	0.00	0.50	0.439	I	O	|	|	|	|	3.73
43.583	0.00	0.50	0.435	I	O	|	|	|	|	3.72
43.667	0.00	0.50	0.432	I	O	|	|	|	|	3.72
43.750	0.00	0.50	0.428	I	O	|	|	|	|	3.71
43.833	0.00	0.50	0.425	I	O	|	|	|	|	3.70
43.917	0.00	0.50	0.422	I	O	|	|	|	|	3.69
44.000	0.00	0.50	0.418	I	O	|	|	|	|	3.68
44.083	0.00	0.50	0.415	I	O	|	|	|	|	3.67
44.167	0.00	0.50	0.411	I	O	|	|	|	|	3.66
44.250	0.00	0.50	0.408	I	O	|	|	|	|	3.65
44.333	0.00	0.50	0.404	I	O	|	|	|	|	3.64
44.417	0.00	0.50	0.401	I	O	|	|	|	|	3.63
44.500	0.00	0.50	0.397	I	O	|	|	|	|	3.62
44.583	0.00	0.50	0.394	I	O	|	|	|	|	3.62
44.667	0.00	0.50	0.391	I	O	|	|	|	|	3.61
44.750	0.00	0.50	0.387	I	O	|	|	|	|	3.60
44.833	0.00	0.50	0.384	I	O	|	|	|	|	3.59
44.917	0.00	0.50	0.380	I	O	|	|	|	|	3.58
45.000	0.00	0.50	0.377	I	O	|	|	|	|	3.57
45.083	0.00	0.50	0.373	I	O	|	|	|	|	3.56
45.167	0.00	0.50	0.370	I	O	|	|	|	|	3.55
45.250	0.00	0.50	0.366	I	O	|	|	|	|	3.54
45.333	0.00	0.50	0.363	I	O	|	|	|	|	3.53
45.417	0.00	0.50	0.360	I	O	|	|	|	|	3.53
45.500	0.00	0.50	0.356	I	O	|	|	|	|	3.52
45.583	0.00	0.50	0.353	I	O	|	|	|	|	3.51
45.667	0.00	0.50	0.349	I	O	|	|	|	|	3.50
45.750	0.00	0.50	0.346	I	O	|	|	|	|	3.49
45.833	0.00	0.50	0.342	I	O	|	|	|	|	3.48
45.917	0.00	0.50	0.339	I	O	|	|	|	|	3.47
46.000	0.00	0.50	0.335	I	O	|	|	|	|	3.46
46.083	0.00	0.50	0.332	I	O	|	|	|	|	3.45
46.167	0.00	0.50	0.329	I	O	|	|	|	|	3.44
46.250	0.00	0.50	0.325	I	O	|	|	|	|	3.43
46.333	0.00	0.50	0.322	I	O	|	|	|	|	3.43
46.417	0.00	0.50	0.318	I	O	|	|	|	|	3.42
46.500	0.00	0.50	0.315	I	O	|	|	|	|	3.41
46.583	0.00	0.50	0.311	I	O	|	|	|	|	3.40
46.667	0.00	0.50	0.308	I	O	|	|	|	|	3.39
46.750	0.00	0.50	0.304	I	O	|	|	|	|	3.38
46.833	0.00	0.50	0.301	I	O	|	|	|	|	3.37
46.917	0.00	0.50	0.298	I	O	|	|	|	|	3.36
47.000	0.00	0.50	0.294	I	O	|	|	|	|	3.35
47.083	0.00	0.50	0.291	I	O	|	|	|	|	3.34
47.167	0.00	0.50	0.287	I	O	|	|	|	|	3.33
47.250	0.00	0.50	0.284	I	O	|	|	|	|	3.33
47.333	0.00	0.50	0.280	I	O	|	|	|	|	3.32
47.417	0.00	0.50	0.277	I	O	|	|	|	|	3.31
47.500	0.00	0.50	0.273	I	O	|	|	|	|	3.30
47.583	0.00	0.50	0.270	I	O	|	|	|	|	3.29
47.667	0.00	0.50	0.267	I	O	|	|	|	|	3.28
47.750	0.00	0.50	0.263	I	O	|	|	|	|	3.27
47.833	0.00	0.50	0.260	I	O	|	|	|	|	3.26
47.917	0.00	0.50	0.256	I	O	|	|	|	|	3.25
48.000	0.00	0.50	0.253	I	O	|	|	|	|	3.24
48.083	0.00	0.50	0.249	I	O	|	|	|	|	3.24
48.167	0.00	0.50	0.246	I	O	|	|	|	|	3.23
48.250	0.00	0.50	0.242	I	O	|	|	|	|	3.22
48.333	0.00	0.50	0.239	I	O	|	|	|	|	3.21

48.417	0.00	0.50	0.236	I	O	|	|	|	|	3.20
48.500	0.00	0.50	0.232	I	O	|	|	|	|	3.19
48.583	0.00	0.50	0.229	I	O	|	|	|	|	3.18
48.667	0.00	0.50	0.225	I	O	|	|	|	|	3.17
48.750	0.00	0.50	0.222	I	O	|	|	|	|	3.16
48.833	0.00	0.50	0.218	I	O	|	|	|	|	3.15
48.917	0.00	0.50	0.215	I	O	|	|	|	|	3.14
49.000	0.00	0.50	0.211	I	O	|	|	|	|	3.14
49.083	0.00	0.50	0.208	I	O	|	|	|	|	3.13
49.167	0.00	0.50	0.205	I	O	|	|	|	|	3.12
49.250	0.00	0.50	0.201	I	O	|	|	|	|	3.11
49.333	0.00	0.50	0.198	I	O	|	|	|	|	3.10
49.417	0.00	0.50	0.194	I	O	|	|	|	|	3.09
49.500	0.00	0.50	0.191	I	O	|	|	|	|	3.08
49.583	0.00	0.50	0.187	I	O	|	|	|	|	3.07
49.667	0.00	0.50	0.184	I	O	|	|	|	|	3.06
49.750	0.00	0.50	0.180	I	O	|	|	|	|	3.05
49.833	0.00	0.50	0.177	I	O	|	|	|	|	3.04
49.917	0.00	0.50	0.174	I	O	|	|	|	|	3.04
50.000	0.00	0.50	0.170	I	O	|	|	|	|	3.03
50.083	0.00	0.50	0.167	I	O	|	|	|	|	3.02
50.167	0.00	0.50	0.163	I	O	|	|	|	|	3.01
50.250	0.00	0.50	0.160	I	O	|	|	|	|	3.00
50.333	0.00	0.50	0.156	I	O	|	|	|	|	2.99
50.417	0.00	0.50	0.153	I	O	|	|	|	|	2.98
50.500	0.00	0.50	0.149	I	O	|	|	|	|	2.97
50.583	0.00	0.50	0.146	I	O	|	|	|	|	2.96
50.667	0.00	0.50	0.143	I	O	|	|	|	|	2.95
50.750	0.00	0.50	0.139	I	O	|	|	|	|	2.94
50.833	0.00	0.50	0.136	I	O	|	|	|	|	2.93
50.917	0.00	0.50	0.132	I	O	|	|	|	|	2.92
51.000	0.00	0.50	0.129	I	O	|	|	|	|	2.91
51.083	0.00	0.50	0.125	I	O	|	|	|	|	2.90
51.167	0.00	0.50	0.122	I	O	|	|	|	|	2.89
51.250	0.00	0.50	0.118	I	O	|	|	|	|	2.88
51.333	0.00	0.50	0.115	I	O	|	|	|	|	2.87
51.417	0.00	0.50	0.112	I	O	|	|	|	|	2.86
51.500	0.00	0.50	0.108	I	O	|	|	|	|	2.85
51.583	0.00	0.50	0.105	I	O	|	|	|	|	2.84
51.667	0.00	0.50	0.101	I	O	|	|	|	|	2.83
51.750	0.00	0.50	0.098	I	O	|	|	|	|	2.82
51.833	0.00	0.50	0.094	I	O	|	|	|	|	2.81
51.917	0.00	0.50	0.091	I	O	|	|	|	|	2.80
52.000	0.00	0.50	0.088	I	O	|	|	|	|	2.79
52.083	0.00	0.50	0.084	I	O	|	|	|	|	2.79
52.167	0.00	0.50	0.081	I	O	|	|	|	|	2.78
52.250	0.00	0.50	0.077	I	O	|	|	|	|	2.77
52.333	0.00	0.50	0.074	I	O	|	|	|	|	2.76
52.417	0.00	0.50	0.070	I	O	|	|	|	|	2.75
52.500	0.00	0.50	0.067	I	O	|	|	|	|	2.74
52.583	0.00	0.50	0.063	I	O	|	|	|	|	2.73
52.667	0.00	0.50	0.060	I	O	|	|	|	|	2.72
52.750	0.00	0.50	0.057	I	O	|	|	|	|	2.71
52.833	0.00	0.50	0.053	I	O	|	|	|	|	2.70
52.917	0.00	0.50	0.050	I	O	|	|	|	|	2.69
53.000	0.00	0.50	0.046	I	O	|	|	|	|	2.68
53.083	0.00	0.50	0.043	I	O	|	|	|	|	2.67
53.167	0.00	0.50	0.039	I	O	|	|	|	|	2.66
53.250	0.00	0.50	0.036	I	O	|	|	|	|	2.65
53.333	0.00	0.50	0.032	I	O	|	|	|	|	2.64
53.417	0.00	0.50	0.029	I	O	|	|	|	|	2.63
53.500	0.00	0.50	0.026	I	O	|	|	|	|	2.62
53.583	0.00	0.50	0.022	I	O	|	|	|	|	2.61

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53.667    0.00    0.50      0.019  I   O   |       |       |       |     2.60
53.750    0.00    0.50      0.015  I   O   |       |       |       |     2.59
53.833    0.00    0.50      0.012  I   O   |       |       |       |     2.58
53.917    0.00    0.50      0.008  I   O   |       |       |       |     2.57
54.000    0.00    0.50      0.005  I   O   |       |       |       |     2.56
54.083    0.00    0.50      0.001  I   O   |       |       |       |     2.55
54.167    0.00    0.00      0.000  O       |       |       |       |     0.00

      ****************************HYDROGRAPH DATA****************************
                    Number of intervals =   650
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        0.500 (CFS)
                    Total volume =       2.195 (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
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Study date: 07/14/25

TRACT 31513 PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY
"EAST" TRIBUTARY (COMBINATION BASIN "C" & "B")
10-YEAR
24-HOUR

Program License Serial Number 6545

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

From study/file name: tcpc2410.rte
**********HYDROGRAPH DATA**********
Number of intervals = 293
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 11.818 (CFS)
Total volume = 3.106 (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 3.020
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 2.28(Ft.)

Initial basin depth = 2.28 (Ft.)
Initial basin storage = 0.26 (Ac.Ft)
Initial basin outflow = 44.22 (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
1.000	0.090	16.640	0.033	0.147
2.000	0.220	23.530	0.139	0.301
2.300	0.260	45.700	0.103	0.417
3.000	0.370	66.300	0.142	0.598
4.000	0.540	86.200	0.243	0.837
5.000	0.740	102.100	0.388	1.092

6.000	0.950	155.600	0.414	1.486
7.000	1.180	307.360	0.122	2.238

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	11.4	22.85	34.28	45.70	Depth (Ft.)
0.083	0.04	0.00	0.000	O	|	|	|	|	0.00
0.167	0.10	0.00	0.000	O	|	|	|	|	0.00
0.250	0.11	0.00	0.000	O	|	|	|	|	0.00
0.333	0.14	0.06	0.000	O	|	|	|	|	0.00
0.417	0.17	0.13	0.001	O	|	|	|	|	0.01
0.500	0.18	0.16	0.001	O	|	|	|	|	0.01
0.583	0.18	0.18	0.001	O	|	|	|	|	0.01
0.667	0.18	0.18	0.001	O	|	|	|	|	0.01
0.750	0.19	0.18	0.001	O	|	|	|	|	0.01
0.833	0.20	0.19	0.001	O	|	|	|	|	0.01
0.917	0.23	0.21	0.001	O	|	|	|	|	0.01
1.000	0.24	0.23	0.001	O	|	|	|	|	0.01
1.083	0.23	0.23	0.001	O	|	|	|	|	0.01
1.167	0.20	0.22	0.001	O	|	|	|	|	0.01
1.250	0.19	0.20	0.001	O	|	|	|	|	0.01
1.333	0.19	0.19	0.001	O	|	|	|	|	0.01
1.417	0.19	0.19	0.001	O	|	|	|	|	0.01
1.500	0.19	0.19	0.001	O	|	|	|	|	0.01
1.583	0.19	0.19	0.001	O	|	|	|	|	0.01
1.667	0.19	0.19	0.001	O	|	|	|	|	0.01
1.750	0.19	0.19	0.001	O	|	|	|	|	0.01
1.833	0.20	0.19	0.001	O	|	|	|	|	0.01
1.917	0.23	0.21	0.001	O	|	|	|	|	0.01
2.000	0.24	0.23	0.001	O	|	|	|	|	0.01
2.083	0.24	0.24	0.001	O	|	|	|	|	0.01
2.167	0.25	0.24	0.001	O	|	|	|	|	0.01
2.250	0.25	0.25	0.001	O	|	|	|	|	0.01
2.333	0.25	0.25	0.001	O	|	|	|	|	0.01
2.417	0.25	0.25	0.001	O	|	|	|	|	0.01
2.500	0.25	0.25	0.001	O	|	|	|	|	0.01
2.583	0.27	0.25	0.001	O	|	|	|	|	0.02
2.667	0.30	0.28	0.001	O	|	|	|	|	0.02
2.750	0.30	0.29	0.002	O	|	|	|	|	0.02
2.833	0.31	0.30	0.002	O	|	|	|	|	0.02
2.917	0.31	0.31	0.002	O	|	|	|	|	0.02
3.000	0.31	0.31	0.002	O	|	|	|	|	0.02
3.083	0.31	0.31	0.002	O	|	|	|	|	0.02
3.167	0.31	0.31	0.002	O	|	|	|	|	0.02
3.250	0.31	0.31	0.002	O	|	|	|	|	0.02
3.333	0.31	0.31	0.002	O	|	|	|	|	0.02
3.417	0.31	0.31	0.002	O	|	|	|	|	0.02
3.500	0.31	0.31	0.002	O	|	|	|	|	0.02
3.583	0.31	0.31	0.002	O	|	|	|	|	0.02
3.667	0.31	0.31	0.002	O	|	|	|	|	0.02
3.750	0.31	0.31	0.002	O	|	|	|	|	0.02
3.833	0.33	0.32	0.002	O	|	|	|	|	0.02
3.917	0.36	0.34	0.002	O	|	|	|	|	0.02
4.000	0.37	0.36	0.002	O	|	|	|	|	0.02
4.083	0.37	0.36	0.002	O	|	|	|	|	0.02
4.167	0.37	0.37	0.002	O	|	|	|	|	0.02
4.250	0.37	0.37	0.002	O	|	|	|	|	0.02
4.333	0.39	0.38	0.002	O	|	|	|	|	0.02
4.417	0.42	0.40	0.002	O	|	|	|	|	0.02

4.500	0.43	0.42	0.002	O	|	|	|	0.03
4.583	0.43	0.43	0.002	O	|	|	|	0.03
4.667	0.43	0.43	0.002	O	|	|	|	0.03
4.750	0.43	0.43	0.002	O	|	|	|	0.03
4.833	0.45	0.44	0.002	O	|	|	|	0.03
4.917	0.48	0.46	0.002	O	|	|	|	0.03
5.000	0.49	0.48	0.003	O	|	|	|	0.03
5.083	0.46	0.47	0.003	O	|	|	|	0.03
5.167	0.40	0.44	0.002	O	|	|	|	0.03
5.250	0.39	0.40	0.002	O	|	|	|	0.02
5.333	0.40	0.39	0.002	O	|	|	|	0.02
5.417	0.42	0.41	0.002	O	|	|	|	0.02
5.500	0.43	0.42	0.002	O	|	|	|	0.03
5.583	0.45	0.43	0.002	O	|	|	|	0.03
5.667	0.48	0.46	0.002	O	|	|	|	0.03
5.750	0.49	0.48	0.003	O	|	|	|	0.03
5.833	0.49	0.49	0.003	O	|	|	|	0.03
5.917	0.49	0.49	0.003	O	|	|	|	0.03
6.000	0.50	0.49	0.003	O	|	|	|	0.03
6.083	0.51	0.50	0.003	O	|	|	|	0.03
6.167	0.54	0.52	0.003	O	|	|	|	0.03
6.250	0.55	0.54	0.003	O	|	|	|	0.03
6.333	0.55	0.55	0.003	O	|	|	|	0.03
6.417	0.56	0.55	0.003	O	|	|	|	0.03
6.500	0.56	0.56	0.003	O	|	|	|	0.03
6.583	0.58	0.56	0.003	O	|	|	|	0.03
6.667	0.61	0.58	0.003	O	|	|	|	0.04
6.750	0.61	0.60	0.003	O	|	|	|	0.04
6.833	0.62	0.61	0.003	O	|	|	|	0.04
6.917	0.62	0.62	0.003	O	|	|	|	0.04
7.000	0.62	0.62	0.003	O	|	|	|	0.04
7.083	0.62	0.62	0.003	O	|	|	|	0.04
7.167	0.62	0.62	0.003	O	|	|	|	0.04
7.250	0.62	0.62	0.003	O	|	|	|	0.04
7.333	0.64	0.63	0.003	O	|	|	|	0.04
7.417	0.67	0.65	0.003	O	|	|	|	0.04
7.500	0.68	0.67	0.004	O	|	|	|	0.04
7.583	0.70	0.68	0.004	O	|	|	|	0.04
7.667	0.73	0.71	0.004	O	|	|	|	0.04
7.750	0.74	0.73	0.004	O	|	|	|	0.04
7.833	0.76	0.74	0.004	O	|	|	|	0.04
7.917	0.79	0.77	0.004	O	|	|	|	0.05
8.000	0.80	0.79	0.004	O	|	|	|	0.05
8.083	0.84	0.81	0.004	O	|	|	|	0.05
8.167	0.90	0.86	0.005	O	|	|	|	0.05
8.250	0.92	0.90	0.005	O	|	|	|	0.05
8.333	0.92	0.91	0.005	O	|	|	|	0.05
8.417	0.93	0.92	0.005	O	|	|	|	0.06
8.500	0.93	0.93	0.005	O	|	|	|	0.06
8.583	0.95	0.94	0.005	O	|	|	|	0.06
8.667	0.98	0.96	0.005	O	|	|	|	0.06
8.750	0.99	0.98	0.005	O	|	|	|	0.06
8.833	1.01	0.99	0.005	O	|	|	|	0.06
8.917	1.04	1.02	0.005	O	|	|	|	0.06
9.000	1.05	1.04	0.006	O	|	|	|	0.06
9.083	1.09	1.06	0.006	O	|	|	|	0.06
9.167	1.15	1.10	0.006	O	|	|	|	0.07
9.250	1.16	1.14	0.006	O	|	|	|	0.07
9.333	1.19	1.17	0.006	O	|	|	|	0.07
9.417	1.22	1.20	0.006	O	|	|	|	0.07
9.500	1.23	1.22	0.007	O	|	|	|	0.07
9.583	1.28	1.25	0.007	O	|	|	|	0.08
9.667	1.37	1.31	0.007	O	|	|	|	0.08

9.750	1.44	1.38	0.007	OI	|	|	|	0.08
9.833	1.67	1.52	0.008	|O	|	|	|	0.09
9.917	2.03	1.78	0.010	|O	|	|	|	0.11
10.000	2.16	2.02	0.011	|O	|	|	|	0.12
10.083	1.84	2.01	0.011	|O	|	|	|	0.12
10.167	1.22	1.63	0.009	IO	|	|	|	0.10
10.250	1.07	1.25	0.007	O	|	|	|	0.08
10.333	1.00	1.08	0.006	O	|	|	|	0.07
10.417	0.96	1.00	0.005	O	|	|	|	0.06
10.500	0.93	0.96	0.005	O	|	|	|	0.06
10.583	1.08	0.99	0.005	O	|	|	|	0.06
10.667	1.33	1.16	0.006	O	|	|	|	0.07
10.750	1.43	1.33	0.007	OI	|	|	|	0.08
10.833	1.51	1.44	0.008	|O	|	|	|	0.09
10.917	1.57	1.52	0.008	|O	|	|	|	0.09
11.000	1.64	1.59	0.009	|O	|	|	|	0.10
11.083	1.52	1.58	0.009	|O	|	|	|	0.10
11.167	1.29	1.44	0.008	IO	|	|	|	0.09
11.250	1.25	1.31	0.007	O	|	|	|	0.08
11.333	1.26	1.27	0.007	O	|	|	|	0.08
11.417	1.29	1.28	0.007	O	|	|	|	0.08
11.500	1.33	1.31	0.007	O	|	|	|	0.08
11.583	1.27	1.30	0.007	O	|	|	|	0.08
11.667	1.12	1.22	0.007	O	|	|	|	0.07
11.750	1.09	1.13	0.006	O	|	|	|	0.07
11.833	1.09	1.10	0.006	O	|	|	|	0.07
11.917	1.11	1.10	0.006	O	|	|	|	0.07
12.000	1.11	1.11	0.006	O	|	|	|	0.07
12.083	2.38	1.60	0.009	|O	|	|	|	0.10
12.167	4.49	3.03	0.016	| OI	|	|	|	0.18
12.250	5.06	4.38	0.024	| O	|	|	|	0.26
12.333	5.52	5.09	0.028	| O	|	|	|	0.31
12.417	5.99	5.61	0.030	| OI	|	|	|	0.34
12.500	6.21	5.99	0.032	| O	|	|	|	0.36
12.583	6.66	6.34	0.034	| O	|	|	|	0.38
12.667	7.32	6.84	0.037	| OI	|	|	|	0.41
12.750	7.53	7.30	0.039	| O	|	|	|	0.44
12.833	7.83	7.60	0.041	| O	|	|	|	0.46
12.917	8.21	7.93	0.043	| O	|	|	|	0.48
13.000	8.37	8.21	0.044	| O	|	|	|	0.49
13.083	9.35	8.71	0.047	| O	|	|	|	0.52
13.167	10.91	9.81	0.053	| OI|	|	|	0.59
13.250	11.35	10.84	0.059	| O|	|	|	0.65
13.333	11.56	11.32	0.061	| OI	|	|	0.68
13.417	11.70	11.56	0.063	| O	|	|	0.69
13.500	11.82	11.72	0.063	| O	|	|	0.70
13.583	9.88	11.04	0.060	| IO|	|	|	0.66
13.667	6.65	8.88	0.048	| I O |	|	|	0.53
13.750	5.86	6.84	0.037	| O |	|	|	0.41
13.833	5.54	5.95	0.032	| IO |	|	|	0.36
13.917	5.38	5.57	0.030	| O |	|	|	0.33
14.000	5.28	5.39	0.029	| O |	|	|	0.32
14.083	6.05	5.60	0.030	| OI |	|	|	0.34
14.167	7.28	6.43	0.035	| OI |	|	|	0.39
14.250	7.63	7.23	0.039	| O |	|	|	0.43
14.333	7.63	7.54	0.041	| O |	|	|	0.45
14.417	7.45	7.54	0.041	| O |	|	|	0.45
14.500	7.48	7.48	0.040	| O |	|	|	0.45
14.583	7.49	7.48	0.040	| O |	|	|	0.45
14.667	7.51	7.50	0.041	| O |	|	|	0.45
14.750	7.54	7.52	0.041	| O |	|	|	0.45
14.833	7.41	7.49	0.040	| O |	|	|	0.45
14.917	7.15	7.33	0.040	| O |	|	|	0.44

15.000	7.12	7.18	0.039	| IO	|	|	|	0.43
15.083	6.95	7.07	0.038	| O	|	|	|	0.42
15.167	6.68	6.87	0.037	| O	|	|	|	0.41
15.250	6.63	6.70	0.036	| O	|	|	|	0.40
15.333	6.46	6.58	0.036	| O	|	|	|	0.40
15.417	6.18	6.38	0.035	| O	|	|	|	0.38
15.500	6.14	6.21	0.034	| O	|	|	|	0.37
15.583	5.42	5.88	0.032	| IO	|	|	|	0.35
15.667	4.26	5.07	0.027	| IO	|	|	|	0.30
15.750	3.98	4.33	0.023	| IO	|	|	|	0.26
15.833	3.89	4.02	0.022	| O	|	|	|	0.24
15.917	3.85	3.90	0.021	| O	|	|	|	0.23
16.000	3.84	3.86	0.021	| O	|	|	|	0.23
16.083	2.81	3.44	0.019	|IO	|	|	|	0.21
16.167	1.07	2.27	0.012	IO	|	|	|	0.14
16.250	0.63	1.17	0.006	O	|	|	|	0.07
16.333	0.44	0.67	0.004	O	|	|	|	0.04
16.417	0.33	0.45	0.002	O	|	|	|	0.03
16.500	0.25	0.32	0.002	O	|	|	|	0.02
16.583	0.23	0.26	0.001	O	|	|	|	0.02
16.667	0.20	0.22	0.001	O	|	|	|	0.01
16.750	0.19	0.20	0.001	O	|	|	|	0.01
16.833	0.19	0.19	0.001	O	|	|	|	0.01
16.917	0.19	0.19	0.001	O	|	|	|	0.01
17.000	0.19	0.19	0.001	O	|	|	|	0.01
17.083	0.22	0.20	0.001	O	|	|	|	0.01
17.167	0.28	0.24	0.001	O	|	|	|	0.01
17.250	0.30	0.28	0.002	O	|	|	|	0.02
17.333	0.30	0.30	0.002	O	|	|	|	0.02
17.417	0.31	0.30	0.002	O	|	|	|	0.02
17.500	0.31	0.31	0.002	O	|	|	|	0.02
17.583	0.31	0.31	0.002	O	|	|	|	0.02
17.667	0.31	0.31	0.002	O	|	|	|	0.02
17.750	0.31	0.31	0.002	O	|	|	|	0.02
17.833	0.29	0.30	0.002	O	|	|	|	0.02
17.917	0.26	0.28	0.002	O	|	|	|	0.02
18.000	0.25	0.26	0.001	O	|	|	|	0.02
18.083	0.25	0.26	0.001	O	|	|	|	0.02
18.167	0.25	0.25	0.001	O	|	|	|	0.02
18.250	0.25	0.25	0.001	O	|	|	|	0.01
18.333	0.25	0.25	0.001	O	|	|	|	0.01
18.417	0.25	0.25	0.001	O	|	|	|	0.01
18.500	0.25	0.25	0.001	O	|	|	|	0.01
18.583	0.23	0.24	0.001	O	|	|	|	0.01
18.667	0.20	0.22	0.001	O	|	|	|	0.01
18.750	0.19	0.20	0.001	O	|	|	|	0.01
18.833	0.17	0.19	0.001	O	|	|	|	0.01
18.917	0.14	0.16	0.001	O	|	|	|	0.01
19.000	0.13	0.14	0.001	O	|	|	|	0.01
19.083	0.15	0.14	0.001	O	|	|	|	0.01
19.167	0.17	0.15	0.001	O	|	|	|	0.01
19.250	0.18	0.17	0.001	O	|	|	|	0.01
19.333	0.20	0.19	0.001	O	|	|	|	0.01
19.417	0.23	0.21	0.001	O	|	|	|	0.01
19.500	0.24	0.23	0.001	O	|	|	|	0.01
19.583	0.23	0.23	0.001	O	|	|	|	0.01
19.667	0.20	0.22	0.001	O	|	|	|	0.01
19.750	0.19	0.20	0.001	O	|	|	|	0.01
19.833	0.17	0.19	0.001	O	|	|	|	0.01
19.917	0.14	0.16	0.001	O	|	|	|	0.01
20.000	0.13	0.14	0.001	O	|	|	|	0.01
20.083	0.15	0.14	0.001	O	|	|	|	0.01
20.167	0.17	0.15	0.001	O	|	|	|	0.01

20.250	0.18	0.17	0.001	O	|	|	|	0.01
20.333	0.18	0.18	0.001	O	|	|	|	0.01
20.417	0.18	0.18	0.001	O	|	|	|	0.01
20.500	0.19	0.18	0.001	O	|	|	|	0.01
20.583	0.19	0.19	0.001	O	|	|	|	0.01
20.667	0.19	0.19	0.001	O	|	|	|	0.01
20.750	0.19	0.19	0.001	O	|	|	|	0.01
20.833	0.17	0.18	0.001	O	|	|	|	0.01
20.917	0.14	0.16	0.001	O	|	|	|	0.01
21.000	0.13	0.14	0.001	O	|	|	|	0.01
21.083	0.15	0.14	0.001	O	|	|	|	0.01
21.167	0.17	0.15	0.001	O	|	|	|	0.01
21.250	0.18	0.17	0.001	O	|	|	|	0.01
21.333	0.16	0.17	0.001	O	|	|	|	0.01
21.417	0.14	0.16	0.001	O	|	|	|	0.01
21.500	0.13	0.14	0.001	O	|	|	|	0.01
21.583	0.15	0.14	0.001	O	|	|	|	0.01
21.667	0.17	0.15	0.001	O	|	|	|	0.01
21.750	0.18	0.17	0.001	O	|	|	|	0.01
21.833	0.16	0.17	0.001	O	|	|	|	0.01
21.917	0.14	0.16	0.001	O	|	|	|	0.01
22.000	0.13	0.14	0.001	O	|	|	|	0.01
22.083	0.15	0.14	0.001	O	|	|	|	0.01
22.167	0.17	0.15	0.001	O	|	|	|	0.01
22.250	0.18	0.17	0.001	O	|	|	|	0.01
22.333	0.16	0.17	0.001	O	|	|	|	0.01
22.417	0.14	0.16	0.001	O	|	|	|	0.01
22.500	0.13	0.14	0.001	O	|	|	|	0.01
22.583	0.13	0.13	0.001	O	|	|	|	0.01
22.667	0.13	0.13	0.001	O	|	|	|	0.01
22.750	0.12	0.13	0.001	O	|	|	|	0.01
22.833	0.12	0.12	0.001	O	|	|	|	0.01
22.917	0.12	0.12	0.001	O	|	|	|	0.01
23.000	0.12	0.12	0.001	O	|	|	|	0.01
23.083	0.12	0.12	0.001	O	|	|	|	0.01
23.167	0.12	0.12	0.001	O	|	|	|	0.01
23.250	0.12	0.12	0.001	O	|	|	|	0.01
23.333	0.12	0.12	0.001	O	|	|	|	0.01
23.417	0.12	0.12	0.001	O	|	|	|	0.01
23.500	0.12	0.12	0.001	O	|	|	|	0.01
23.583	0.12	0.12	0.001	O	|	|	|	0.01
23.667	0.12	0.12	0.001	O	|	|	|	0.01
23.750	0.12	0.12	0.001	O	|	|	|	0.01
23.833	0.12	0.12	0.001	O	|	|	|	0.01
23.917	0.12	0.12	0.001	O	|	|	|	0.01
24.000	0.12	0.12	0.001	O	|	|	|	0.01
24.083	0.09	0.11	0.001	O	|	|	|	0.01
24.167	0.03	0.07	0.000	O	|	|	|	0.00
24.250	0.01	0.03	0.000	O	|	|	|	0.00
24.333	0.01	0.01	0.000	O	|	|	|	0.00
24.417	0.00	0.01	0.000	O	|	|	|	0.00
24.500	0.00	0.00	0.000	O	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

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

Number of intervals = 294
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 11.716 (CFS)
Total volume = 3.105 (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        3.020 to Point/Station        2.460
**** STREAM ROUTING SCS CONVEX METHOD ****
______________________________________________________________________________
HYDROGRAPH STREAM ROUTING DATA:
Length of stream =   2423.00 (Ft.)
Elevation difference =   75.90 (Ft.)
Slope of channel =  0.031325 (Vert/Horiz)
Channel type - Pipe


Pipe length  =  2423.00(Ft.)   Elevation difference =  75.90(Ft.)
Manning's N = 0.013   No. of pipes = 1
Pipe evaluation using mean flow rate of hydrograph
Required pipe flow  =     2.126(CFS)
Given pipe size =     48.00(In.)
Calculated individual pipe flow  =     2.126(CFS)
Normal flow depth in pipe =    3.11(In.)
Flow top width inside pipe =   23.65(In.)
Critical depth could not be calculated.
Pipe flow velocity =      6.15(Ft/s)
Travel time through pipe =    6.56 min.


Pipe length  =  2423.00(Ft.)   Elevation difference =  75.90(Ft.)
Manning's N = 0.013   No. of pipes = 1
Pipe evaluation using maximum flow rate of hydrograph
Required pipe flow  =    11.716(CFS)
Given pipe size =     48.00(In.)
Calculated individual pipe flow  =    11.716(CFS)
Normal flow depth in pipe =    7.02(In.)
Flow top width inside pipe =   33.92(In.)
Critical Depth =    1.00(Ft.)
Pipe flow velocity =     10.29(Ft/s)
Travel time through pipe =    3.92 min.

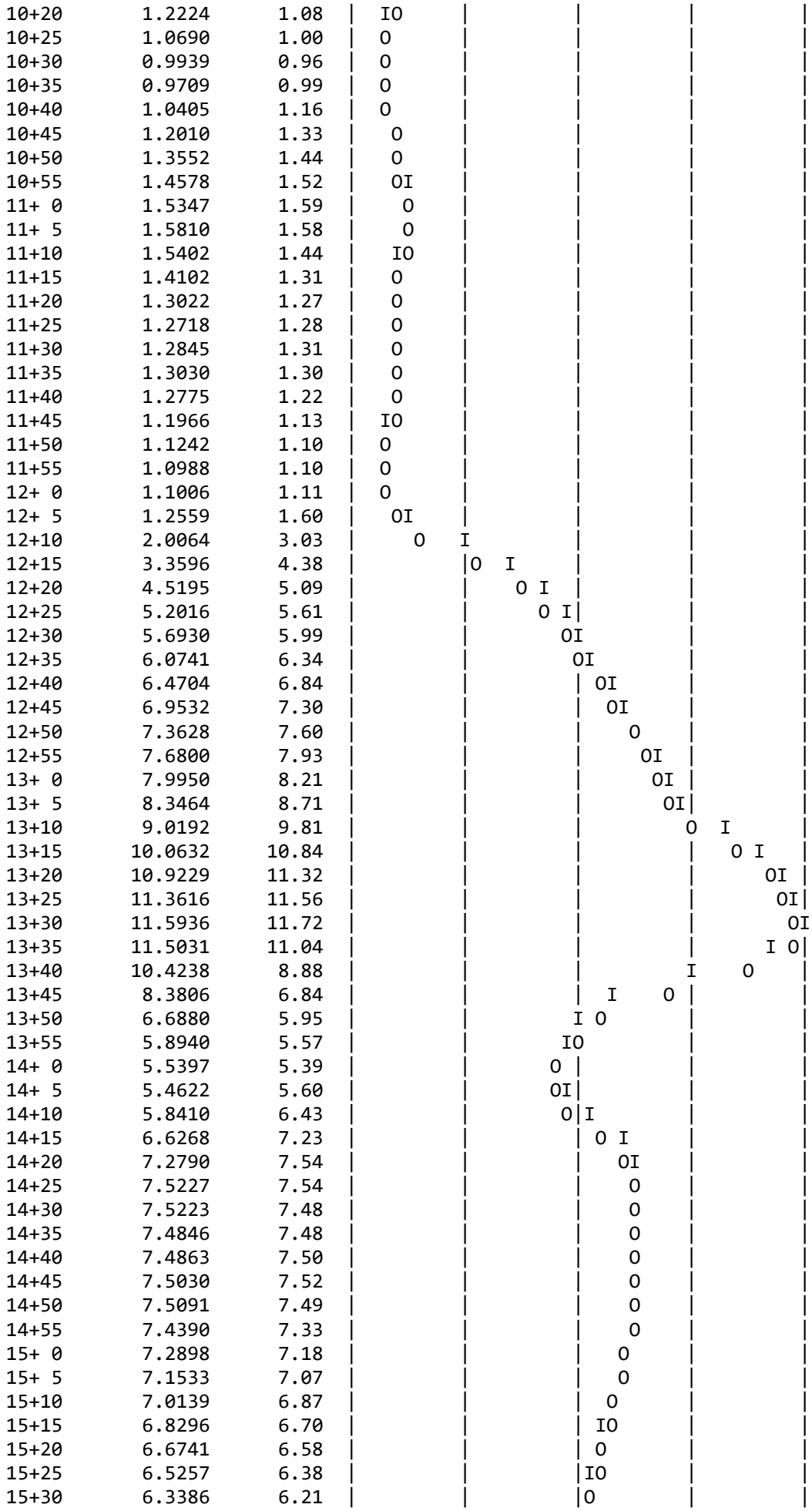

********************** SCS CONVEX CHANNEL ROUTING **********************
Convex method of stream routing  data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
          where c* = 1 - (1-c)^e and dt = c(length)/velocity
          c(v/v+1.7) =   0.8583   Travel time =   3.92 (min.)
        dt*(unit time interval) =   5.00(min.),  e=   1.3233
        dt(routing time-step) =   3.37 (min.),   c* =   0.9246

Output hydrograph delayed by 0  unit time increments


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                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)	Out = O(CFS)	In = I	0	2.9	5.9	8.8	11.7
0+ 5	0.0000	0.00	O				
0+10	0.0000	0.00	O				
0+15	0.0000	0.00	O				
0+20	0.0175	0.06	O				
0+25	0.0771	0.13	O				
0+30	0.1374	0.16	O				
0+35	0.1665	0.18	O				
0+40	0.1781	0.18	O				
0+45	0.1827	0.18	O				
0+50	0.1869	0.19	O				
0+55	0.1984	0.21	O				
1+ 0	0.2177	0.23	O				
1+ 5	0.2315	0.23	O				
1+10	0.2285	0.22	O				
1+15	0.2131	0.20	O				
1+20	0.1991	0.19	O				
1+25	0.1923	0.19	O				
1+30	0.1889	0.19	O				
1+35	0.1871	0.19	O				
1+40	0.1862	0.19	O				
1+45	0.1860	0.19	O				
1+50	0.1881	0.19	O				
1+55	0.1987	0.21	O				
2+ 0	0.2178	0.23	O				
2+ 5	0.2336	0.24	O				
2+10	0.2413	0.24	O				
2+15	0.2449	0.25	O				
2+20	0.2468	0.25	O				
2+25	0.2476	0.25	O				
2+30	0.2479	0.25	O				
2+35	0.2500	0.25	O				
2+40	0.2607	0.28	O				
2+45	0.2798	0.29	OI				
2+50	0.2956	0.30	|O				
2+55	0.3033	0.31	|O				
3+ 0	0.3069	0.31	|O				
3+ 5	0.3088	0.31	|O				
3+10	0.3096	0.31	|O				
3+15	0.3098	0.31	|O				
3+20	0.3099	0.31	|O				
3+25	0.3099	0.31	|O				
3+30	0.3099	0.31	|O				
3+35	0.3099	0.31	|O				
3+40	0.3099	0.31	|O				
3+45	0.3099	0.31	|O				
3+50	0.3120	0.32	|O				
3+55	0.3227	0.34	|O				
4+ 0	0.3418	0.36	|O				
4+ 5	0.3576	0.36	|O				
4+10	0.3652	0.37	|O				
4+15	0.3689	0.37	|O				
4+20	0.3729	0.38	|O				
4+25	0.3844	0.40	|O				
4+30	0.4037	0.42	|O				
4+35	0.4196	0.43	|O				
4+40	0.4272	0.43	|O				
4+45	0.4309	0.43	|O				
4+50	0.4349	0.44	|O				
4+55	0.4463	0.46	|O				
5+ 0	0.4657	0.48	|O				

5+ 5	0.4773	0.47	O				
5+10	0.4637	0.44	O				
5+15	0.4292	0.40	O				
5+20	0.4015	0.39	O				
5+25	0.3977	0.41	O				
5+30	0.4097	0.42	O				
5+35	0.4239	0.43	O				
5+40	0.4405	0.46	O				
5+45	0.4628	0.48	O				
5+50	0.4805	0.49	O				
5+55	0.4889	0.49	O				
6+ 0	0.4928	0.49	O				
6+ 5	0.4968	0.50	O				
6+10	0.5083	0.52	O				
6+15	0.5276	0.54	O				
6+20	0.5435	0.55	O				
6+25	0.5512	0.55	O				
6+30	0.5548	0.56	O				
6+35	0.5588	0.56	O				
6+40	0.5703	0.58	O				
6+45	0.5896	0.60	O				
6+50	0.6055	0.61	O				
6+55	0.6132	0.62	O				
7+ 0	0.6168	0.62	O				
7+ 5	0.6187	0.62	O				
7+10	0.6195	0.62	O				
7+15	0.6198	0.62	O				
7+20	0.6219	0.63	O				
7+25	0.6326	0.65	O				
7+30	0.6517	0.67	O				
7+35	0.6696	0.68	O				
7+40	0.6879	0.71	O				
7+45	0.7106	0.73	O				
7+50	0.7305	0.74	O				
7+55	0.7496	0.77	O				
8+ 0	0.7725	0.79	O				
8+ 5	0.7946	0.81	O				
8+10	0.8243	0.86	O				
8+15	0.8664	0.90	OI				
8+20	0.9000	0.91	O				
8+25	0.9161	0.92	O				
8+30	0.9236	0.93	O				
8+35	0.9296	0.94	O				
8+40	0.9419	0.96	O				
8+45	0.9614	0.98	O				
8+50	0.9795	0.99	O				
8+55	0.9978	1.02	O				
9+ 0	1.0205	1.04	O				
9+ 5	1.0425	1.06	O				
9+10	1.0722	1.10	O				
9+15	1.1143	1.14	O				
9+20	1.1500	1.17	O				
9+25	1.1768	1.20	O				
9+30	1.2034	1.22	O				
9+35	1.2283	1.25	O				
9+40	1.2658	1.31	O				
9+45	1.3284	1.38	O				
9+50	1.4193	1.52	OI				
9+55	1.5880	1.78	OI				
10+ 0	1.8377	2.02	O				
10+ 5	2.0051	2.01	O				
10+10	1.8935	1.63	IO				
10+15	1.5380	1.25	IO				



10+20	1.2224	1.08	IO				
10+25	1.0690	1.00	O				
10+30	0.9939	0.96	O				
10+35	0.9709	0.99	O				
10+40	1.0405	1.16	O				
10+45	1.2010	1.33	O				
10+50	1.3552	1.44	O				
10+55	1.4578	1.52	OI				
11+ 0	1.5347	1.59	O				
11+ 5	1.5810	1.58	O				
11+10	1.5402	1.44	IO				
11+15	1.4102	1.31	O				
11+20	1.3022	1.27	O				
11+25	1.2718	1.28	O				
11+30	1.2845	1.31	O				
11+35	1.3030	1.30	O				
11+40	1.2775	1.22	O				
11+45	1.1966	1.13	IO				
11+50	1.1242	1.10	O				
11+55	1.0988	1.10	O				
12+ 0	1.1006	1.11	O				
12+ 5	1.2559	1.60	OI				
12+10	2.0064	3.03	O I				
12+15	3.3596	4.38	O I				
12+20	4.5195	5.09	O I				
12+25	5.2016	5.61	O I				
12+30	5.6930	5.99	OI				
12+35	6.0741	6.34	OI				
12+40	6.4704	6.84	OI				
12+45	6.9532	7.30	OI				
12+50	7.3628	7.60	O				
12+55	7.6800	7.93	OI				
13+ 0	7.9950	8.21	OI				
13+ 5	8.3464	8.71	OI				
13+10	9.0192	9.81	O I				
13+15	10.0632	10.84	O I				
13+20	10.9229	11.32	OI				
13+25	11.3616	11.56	OI				
13+30	11.5936	11.72	OI				
13+35	11.5031	11.04	I O				
13+40	10.4238	8.88	I O				
13+45	8.3806	6.84	I O				
13+50	6.6880	5.95	I O				
13+55	5.8940	5.57	IO				
14+ 0	5.5397	5.39	O				
14+ 5	5.4622	5.60	OI				
14+10	5.8410	6.43	O				
14+15	6.6268	7.23	O I				
14+20	7.2790	7.54	OI				
14+25	7.5227	7.54	O				
14+30	7.5223	7.48	O				
14+35	7.4846	7.48	O				
14+40	7.4863	7.50	O				
14+45	7.5030	7.52	O				
14+50	7.5091	7.49	O				
14+55	7.4390	7.33	O				
15+ 0	7.2898	7.18	O				
15+ 5	7.1533	7.07	O				
15+10	7.0139	6.87	O				
15+15	6.8296	6.70	IO				
15+20	6.6741	6.58	O				
15+25	6.5257	6.38	IO				
15+30	6.3386	6.21	O				

15+35	6.1183	5.88	|	| O	|	|
15+40	5.6506	5.07	|	| I O|	|	|
15+45	4.8898	4.33	|	| I O |	|	|
15+50	4.2785	4.02	|	| IO |	|	|
15+55	4.0056	3.90	|	| O |	|	|
16+ 0	3.8988	3.86	|	| O |	|	|
16+ 5	3.7376	3.44	|	|IO |	|	|
16+10	3.1130	2.27	|	I O |	|	|
16+15	2.0030	1.17	| I O |	|	|	|
16+20	1.0808	0.67	| IO |	|	|	|
16+25	0.6359	0.45	|IO |	|	|	|
16+30	0.4239	0.32	|O |	|	|	|
16+35	0.3112	0.26	IO |	|	|	|
16+40	0.2517	0.22	O |	|	|	|
16+45	0.2199	0.20	O |	|	|	|
16+50	0.2011	0.19	O |	|	|	|
16+55	0.1928	0.19	O |	|	|	|
17+ 0	0.1890	0.19	O |	|	|	|
17+ 5	0.1913	0.20	O |	|	|	|
17+10	0.2117	0.24	O |	|	|	|
17+15	0.2497	0.28	O |	|	|	|
17+20	0.2813	0.30	OI |	|	|	|
17+25	0.2966	0.30	|O |	|	|	|
17+30	0.3039	0.31	|O |	|	|	|
17+35	0.3077	0.31	|O |	|	|	|
17+40	0.3093	0.31	|O |	|	|	|
17+45	0.3098	0.31	|O |	|	|	|
17+50	0.3078	0.30	|O |	|	|	|
17+55	0.2972	0.28	IO |	|	|	|
18+ 0	0.2781	0.26	O |	|	|	|
18+ 5	0.2622	0.26	O |	|	|	|
18+10	0.2546	0.25	O |	|	|	|
18+15	0.2509	0.25	O |	|	|	|
18+20	0.2490	0.25	O |	|	|	|
18+25	0.2482	0.25	O |	|	|	|
18+30	0.2480	0.25	O |	|	|	|
18+35	0.2458	0.24	O |	|	|	|
18+40	0.2352	0.22	O |	|	|	|
18+45	0.2161	0.20	O |	|	|	|
18+50	0.1981	0.19	O |	|	|	|
18+55	0.1799	0.16	O |	|	|	|
19+ 0	0.1571	0.14	O |	|	|	|
19+ 5	0.1415	0.14	O |	|	|	|
19+10	0.1436	0.15	O |	|	|	|
19+15	0.1589	0.17	O |	|	|	|
19+20	0.1749	0.19	O |	|	|	|
19+25	0.1923	0.21	O |	|	|	|
19+30	0.2148	0.23	O |	|	|	|
19+35	0.2304	0.23	O |	|	|	|
19+40	0.2282	0.22	O |	|	|	|
19+45	0.2130	0.20	O |	|	|	|
19+50	0.1970	0.19	O |	|	|	|
19+55	0.1796	0.16	O |	|	|	|
20+ 0	0.1571	0.14	O |	|	|	|
20+ 5	0.1415	0.14	O |	|	|	|
20+10	0.1436	0.15	O |	|	|	|
20+15	0.1589	0.17	O |	|	|	|
20+20	0.1728	0.18	O |	|	|	|
20+25	0.1796	0.18	O |	|	|	|
20+30	0.1830	0.18	O |	|	|	|
20+35	0.1848	0.19	O |	|	|	|
20+40	0.1857	0.19	O |	|	|	|
20+45	0.1859	0.19	O |	|	|	|

20+50	0.1838	0.18	O	|	|	|	|
20+55	0.1732	0.16	O	|	|	|	|
21+ 0	0.1541	0.14	O	|	|	|	|
21+ 5	0.1404	0.14	O	|	|	|	|
21+10	0.1434	0.15	O	|	|	|	|
21+15	0.1588	0.17	O	|	|	|	|
21+20	0.1706	0.17	O	|	|	|	|
21+25	0.1668	0.16	O	|	|	|	|
21+30	0.1512	0.14	O	|	|	|	|
21+35	0.1393	0.14	O	|	|	|	|
21+40	0.1431	0.15	O	|	|	|	|
21+45	0.1588	0.17	O	|	|	|	|
21+50	0.1706	0.17	O	|	|	|	|
21+55	0.1668	0.16	O	|	|	|	|
22+ 0	0.1512	0.14	O	|	|	|	|
22+ 5	0.1393	0.14	O	|	|	|	|
22+10	0.1431	0.15	O	|	|	|	|
22+15	0.1588	0.17	O	|	|	|	|
22+20	0.1706	0.17	O	|	|	|	|
22+25	0.1668	0.16	O	|	|	|	|
22+30	0.1512	0.14	O	|	|	|	|
22+35	0.1372	0.13	O	|	|	|	|
22+40	0.1303	0.13	O	|	|	|	|
22+45	0.1269	0.13	O	|	|	|	|
22+50	0.1251	0.12	O	|	|	|	|
22+55	0.1242	0.12	O	|	|	|	|
23+ 0	0.1240	0.12	O	|	|	|	|
23+ 5	0.1240	0.12	O	|	|	|	|
23+10	0.1240	0.12	O	|	|	|	|
23+15	0.1240	0.12	O	|	|	|	|
23+20	0.1240	0.12	O	|	|	|	|
23+25	0.1240	0.12	O	|	|	|	|
23+30	0.1240	0.12	O	|	|	|	|
23+35	0.1240	0.12	O	|	|	|	|
23+40	0.1240	0.12	O	|	|	|	|
23+45	0.1240	0.12	O	|	|	|	|
23+50	0.1240	0.12	O	|	|	|	|
23+55	0.1240	0.12	O	|	|	|	|
24+ 0	0.1240	0.12	O	|	|	|	|
24+ 5	0.1197	0.11	O	|	|	|	|
24+10	0.0985	0.07	O	|	|	|	|
24+15	0.0603	0.03	O	|	|	|	|
24+20	0.0286	0.01	O	|	|	|	|
24+25	0.0133	0.01	O	|	|	|	|
24+30	0.0060	0.00	O	|	|	|	|
24+35	0.0021	0.00	O	|	|	|	|
24+40	0.0000	0.00	O	|	|	|	|

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

Number of intervals = 296
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 11.594 (CFS)
Total volume = 3.105 (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 2.000 to Point/Station 2.460
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

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

From study/file name: tcpb2410.rte

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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	4.1	8.3	12.4	16.5
0+ 5	0.0780	0.08	Q				
0+10	0.1797	0.18	Q				
0+15	0.2031	0.20	Q				
0+20	0.2522	0.27	Q				
0+25	0.3079	0.39	Q				
0+30	0.3213	0.46	qQ				
0+35	0.3264	0.49	qQ				
0+40	0.3288	0.51	qQ				
0+45	0.3297	0.51	qQ				
0+50	0.3687	0.56	qQ				
0+55	0.4196	0.62	|Q				
1+ 0	0.4312	0.65	|Q				
1+ 5	0.3973	0.63	qQ				
1+10	0.3489	0.58	qQ				
1+15	0.3380	0.55	qQ				
1+20	0.3330	0.53	qQ				
1+25	0.3306	0.52	qQ				
1+30	0.3297	0.52	qQ				
1+35	0.3297	0.52	qQ				
1+40	0.3297	0.52	qQ				
1+45	0.3297	0.52	qQ				
1+50	0.3687	0.56	qQ				
1+55	0.4196	0.62	|Q				
2+ 0	0.4312	0.65	|Q				
2+ 5	0.4363	0.67	|Q				
2+10	0.4387	0.68	|Q				
2+15	0.4396	0.68	|Q				
2+20	0.4396	0.69	|Q				
2+25	0.4396	0.69	|Q				
2+30	0.4396	0.69	|Q				
2+35	0.4786	0.73	|Q				
2+40	0.5295	0.79	|Q				
2+45	0.5411	0.82	|Q				
2+50	0.5462	0.84	|qQ				
2+55	0.5486	0.85	|qQ				
3+ 0	0.5495	0.86	|qQ				
3+ 5	0.5495	0.86	|qQ				
3+10	0.5495	0.86	|qQ				
3+15	0.5495	0.86	|qQ				
3+20	0.5495	0.86	|qQ				
3+25	0.5495	0.86	|qQ				
3+30	0.5495	0.86	|qQ				
3+35	0.5495	0.86	|qQ				
3+40	0.5495	0.86	|qQ				
3+45	0.5495	0.86	|qQ				
3+50	0.5885	0.90	|qQ				
3+55	0.6394	0.96	|qQ				
4+ 0	0.6510	0.99	|qQ				

```
4+ 5       0.6561      1.01  |qQ       |          |          |          |
4+10       0.6585      1.02  |qQ       |          |          |          |
4+15       0.6594      1.03  |qQ       |          |          |          |
4+20       0.6984      1.07  |qQ       |          |          |          |
4+25       0.7493      1.13  |qQ       |          |          |          |
4+30       0.7609      1.16  |qQ       |          |          |          |
4+35       0.7660      1.19  |qQ       |          |          |          |
4+40       0.7684      1.20  |qQ       |          |          |          |
4+45       0.7693      1.20  |qQ       |          |          |          |
4+50       0.8083      1.24  |q Q      |          |          |          |
4+55       0.8592      1.31  | qQ      |          |          |          |
5+ 0       0.8708      1.34  | qQ      |          |          |          |
5+ 5       0.7979      1.28  |q Q      |          |          |          |
5+10       0.6986      1.16  |qQ       |          |          |          |
5+15       0.6761      1.11  |qQ       |          |          |          |
5+20       0.7050      1.11  |qQ       |          |          |          |
5+25       0.7510      1.15  |qQ       |          |          |          |
5+30       0.7609      1.17  |qQ       |          |          |          |
5+35       0.8050      1.23  |qQ       |          |          |          |
5+40       0.8583      1.30  | qQ      |          |          |          |
5+45       0.8708      1.33  | qQ      |          |          |          |
5+50       0.8759      1.36  | qQ      |          |          |          |
5+55       0.8783      1.37  | qQ      |          |          |          |
6+ 0       0.8792      1.37  | qQ      |          |          |          |
6+ 5       0.9182      1.42  | qQ      |          |          |          |
6+10       0.9691      1.48  | qQ      |          |          |          |
6+15       0.9807      1.51  | qQ      |          |          |          |
6+20       0.9858      1.53  | qQ      |          |          |          |
6+25       0.9882      1.54  | qQ      |          |          |          |
6+30       0.9891      1.54  | qQ      |          |          |          |
6+35       1.0281      1.59  | qQ      |          |          |          |
6+40       1.0790      1.65  | qQ      |          |          |          |
6+45       1.0906      1.68  | q Q     |          |          |          |
6+50       1.0957      1.70  | q Q     |          |          |          |
6+55       1.0981      1.71  | q Q     |          |          |          |
7+ 0       1.0990      1.72  | q Q     |          |          |          |
7+ 5       1.0990      1.72  | q Q     |          |          |          |
7+10       1.0990      1.72  | q Q     |          |          |          |
7+15       1.0990      1.72  | q Q     |          |          |          |
7+20       1.1380      1.76  | q Q     |          |          |          |
7+25       1.1889      1.82  | q Q     |          |          |          |
7+30       1.2005      1.85  | q Q     |          |          |          |
7+35       1.2446      1.91  |  qQ     |          |          |          |
7+40       1.2979      1.99  |  qQ     |          |          |          |
7+45       1.3104      2.02  |  qQ     |          |          |          |
7+50       1.3545      2.08  |  q Q    |          |          |          |
7+55       1.4078      2.16  |  q Q    |          |          |          |
8+ 0       1.4203      2.19  |  q Q    |          |          |          |
8+ 5       1.5034      2.30  |  q Q    |          |          |          |
8+10       1.6075      2.43  |  q Q    |          |          |          |
8+15       1.6318      2.50  |  q  Q   |          |          |          |
8+20       1.6419      2.54  |  q  Q   |          |          |          |
8+25       1.6467      2.56  |  q  Q   |          |          |          |
8+30       1.6485      2.57  |  q  Q   |          |          |          |
8+35       1.6875      2.62  |   q Q   |          |          |          |
8+40       1.7384      2.68  |   q Q   |          |          |          |
8+45       1.7500      2.71  |   q Q   |          |          |          |
8+50       1.7941      2.77  |   q Q   |          |          |          |
8+55       1.8474      2.85  |   q Q   |          |          |          |
9+ 0       1.8599      2.88  |   q Q   |          |          |          |
9+ 5       1.9430      2.99  |   q  Q  |          |          |          |
9+10       2.0471      3.12  |   q  Q  |          |          |          |
9+15       2.0714      3.19  |    q Q  |          |          |          |
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9+20	2.1205	3.27	q Q				
9+25	2.1762	3.35	q Q				
9+30	2.1896	3.39	q Q				
9+35	2.2337	3.46	q Q				
9+40	2.2870	3.55	q Q				
9+45	2.2995	3.63	q Q				
9+50	2.3436	3.76	q Q				
9+55	2.3969	3.98	q Q				
10+ 0	2.4094	4.25	q Q				
10+ 5	2.1414	4.15	q Q				
10+10	1.7879	3.68	q Q				
10+15	1.7069	3.24	q Q				
10+20	1.6717	2.89	q Q				
10+25	1.6547	2.72	q Q				
10+30	1.6485	2.64	q Q				
10+35	1.8435	2.81	q Q				
10+40	2.0978	3.14	q Q				
10+45	2.1562	3.36	q Q				
10+50	2.1814	3.54	q Q				
10+55	2.1936	3.65	q Q				
11+ 0	2.1980	3.73	q Q				
11+ 5	2.1590	3.74	q Q				
11+10	2.1081	3.65	q Q				
11+15	2.0964	3.51	q Q				
11+20	2.0914	3.39	q Q				
11+25	2.0890	3.36	q Q				
11+30	2.0881	3.37	q Q				
11+35	2.0101	3.31	q Q				
11+40	1.9084	3.19	q Q				
11+45	1.8850	3.08	q Q				
11+50	1.9139	3.04	q Q				
11+55	1.9599	3.06	q Q				
12+ 0	1.9698	3.07	q Q				
12+ 5	2.2479	3.50	q Q				
12+10	2.6063	4.61	q Q				
12+15	2.6890	6.05	q Q				
12+20	2.7633	7.28	q Q				
12+25	2.8312	8.03	q Q				
12+30	2.8490	8.54	q Q				
12+35	2.9321	9.01	q Q				
12+40	3.0362	9.51	q Q				
12+45	3.0605	10.01	q Q				
12+50	3.1096	10.47	q Q				
12+55	3.1653	10.85	q Q				
13+ 0	3.1787	11.17	q Q				
13+ 5	3.7427	12.09	q Q				
13+10	4.4883	13.51	q Q				
13+15	4.6899	14.75	q Q				
13+20	4.7995	15.72	q Q				
13+25	4.8735	16.24	q Q				
13+30	4.9260	16.52	q Q				
13+35	4.0872	15.59	q Q				
13+40	2.9673	13.39	q Q				
13+45	2.7112	11.09	q Q				
13+50	2.6008	9.29	q Q				
13+55	2.5473	8.44	q Q				
14+ 0	2.5277	8.07	q Q				
14+ 5	2.6837	8.15	q Q				
14+10	2.8871	8.73	q Q				
14+15	2.9339	9.56	q Q				
14+20	2.9150	10.19	q Q				
14+25	2.8739	10.40	q Q				
14+30	2.8657	10.39	q Q				

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14+35       2.8607     10.35  |     q    |          |    Q     |          |
14+40       2.8583     10.34  |     q    |          |    Q     |          |
14+45       2.8574     10.36  |     q    |          |    Q     |          |
14+50       2.8184     10.33  |     q    |          |    Q     |          |
14+55       2.7675     10.21  |     q    |          |   Q      |          |
15+ 0       2.7558     10.05  |     q    |          |   Q      |          |
15+ 5       2.7118      9.87  |     q    |          |  Q       |          |
15+10       2.6585      9.67  |     q    |          |  Q       |          |
15+15       2.6459      9.48  |     q    |          | Q        |          |
15+20       2.6019      9.28  |     q    |          | Q        |          |
15+25       2.5486      9.07  |     q    |          |Q         |          |
15+30       2.5360      8.87  |     q    |          |Q         |          |
15+35       2.3750      8.49  |    q     |         Q          |          |
15+40       2.1691      7.82  |    q     |       Q  |         |          |
15+45       2.1215      7.01  |    q     |     Q    |         |          |
15+50       2.1014      6.38  |    q     |    Q     |         |          |
15+55       2.0916      6.10  |    q     |   Q      |         |          |
16+ 0       2.0881      5.99  |    q     |   Q      |         |          |
16+ 5       1.5030      5.24  |  q       | Q        |         |          |
16+10       0.7402      3.85  |q       Q|          |         |          |
16+15       0.5648      2.57  |q    Q    |          |         |          |
16+20       0.4893      1.57  |q Q       |          |         |          |
16+25       0.4529      1.09  |qQ        |          |         |          |
16+30       0.4396      0.86  |qQ        |          |         |          |
16+35       0.4006      0.71  qQ         |          |         |          |
16+40       0.3497      0.60  qQ         |          |         |          |
16+45       0.3380      0.56  qQ         |          |         |          |
16+50       0.3330      0.53  qQ         |          |         |          |
16+55       0.3306      0.52  qQ         |          |         |          |
17+ 0       0.3297      0.52  qQ         |          |         |          |
17+ 5       0.4077      0.60  qQ         |          |         |          |
17+10       0.5094      0.72  |Q         |          |         |          |
17+15       0.5328      0.78  |Q         |          |         |          |
17+20       0.5429      0.82  |Q         |          |         |          |
17+25       0.5477      0.84  |qQ        |          |         |          |
17+30       0.5495      0.85  |qQ        |          |         |          |
17+35       0.5495      0.86  |qQ        |          |         |          |
17+40       0.5495      0.86  |qQ        |          |         |          |
17+45       0.5495      0.86  |qQ        |          |         |          |
17+50       0.5105      0.82  |Q         |          |         |          |
17+55       0.4596      0.76  |Q         |          |         |          |
18+ 0       0.4479      0.73  |Q         |          |         |          |
18+ 5       0.4429      0.71  |Q         |          |         |          |
18+10       0.4405      0.70  |Q         |          |         |          |
18+15       0.4396      0.69  |Q         |          |         |          |
18+20       0.4396      0.69  |Q         |          |         |          |
18+25       0.4396      0.69  |Q         |          |         |          |
18+30       0.4396      0.69  |Q         |          |         |          |
18+35       0.4006      0.65  qQ         |          |         |          |
18+40       0.3497      0.58  qQ         |          |         |          |
18+45       0.3380      0.55  qQ         |          |         |          |
18+50       0.2940      0.49  qQ         |          |         |          |
18+55       0.2407      0.42  qQ         |          |         |          |
19+ 0       0.2281      0.39  Q          |          |         |          |
19+ 5       0.2621      0.40  Q          |          |         |          |
19+10       0.3105      0.45  qQ         |          |         |          |
19+15       0.3213      0.48  qQ         |          |         |          |
19+20       0.3654      0.54  qQ         |          |         |          |
19+25       0.4187      0.61  |Q         |          |         |          |
19+30       0.4312      0.65  |Q         |          |         |          |
19+35       0.3973      0.63  qQ         |          |         |          |
19+40       0.3489      0.58  qQ         |          |         |          |
19+45       0.3380      0.55  qQ         |          |         |          |
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19+50	0.2940	0.49	qQ	|	|	|	|
19+55	0.2407	0.42	qQ	|	|	|	|
20+ 0	0.2281	0.39	Q	|	|	|	|
20+ 5	0.2621	0.40	Q	|	|	|	|
20+10	0.3105	0.45	qQ	|	|	|	|
20+15	0.3213	0.48	qQ	|	|	|	|
20+20	0.3264	0.50	qQ	|	|	|	|
20+25	0.3288	0.51	qQ	|	|	|	|
20+30	0.3297	0.51	qQ	|	|	|	|
20+35	0.3297	0.51	qQ	|	|	|	|
20+40	0.3297	0.52	qQ	|	|	|	|
20+45	0.3297	0.52	qQ	|	|	|	|
20+50	0.2907	0.47	qQ	|	|	|	|
20+55	0.2398	0.41	qQ	|	|	|	|
21+ 0	0.2281	0.38	Q	|	|	|	|
21+ 5	0.2621	0.40	Q	|	|	|	|
21+10	0.3105	0.45	qQ	|	|	|	|
21+15	0.3213	0.48	qQ	|	|	|	|
21+20	0.2874	0.46	qQ	|	|	|	|
21+25	0.2390	0.41	Q	|	|	|	|
21+30	0.2281	0.38	Q	|	|	|	|
21+35	0.2621	0.40	Q	|	|	|	|
21+40	0.3105	0.45	qQ	|	|	|	|
21+45	0.3213	0.48	qQ	|	|	|	|
21+50	0.2874	0.46	qQ	|	|	|	|
21+55	0.2390	0.41	Q	|	|	|	|
22+ 0	0.2281	0.38	Q	|	|	|	|
22+ 5	0.2621	0.40	Q	|	|	|	|
22+10	0.3105	0.45	qQ	|	|	|	|
22+15	0.3213	0.48	qQ	|	|	|	|
22+20	0.2874	0.46	qQ	|	|	|	|
22+25	0.2390	0.41	Q	|	|	|	|
22+30	0.2281	0.38	Q	|	|	|	|
22+35	0.2231	0.36	Q	|	|	|	|
22+40	0.2207	0.35	Q	|	|	|	|
22+45	0.2198	0.35	Q	|	|	|	|
22+50	0.2198	0.34	Q	|	|	|	|
22+55	0.2198	0.34	Q	|	|	|	|
23+ 0	0.2198	0.34	Q	|	|	|	|
23+ 5	0.2198	0.34	Q	|	|	|	|
23+10	0.2198	0.34	Q	|	|	|	|
23+15	0.2198	0.34	Q	|	|	|	|
23+20	0.2198	0.34	Q	|	|	|	|
23+25	0.2198	0.34	Q	|	|	|	|
23+30	0.2198	0.34	Q	|	|	|	|
23+35	0.2198	0.34	Q	|	|	|	|
23+40	0.2198	0.34	Q	|	|	|	|
23+45	0.2198	0.34	Q	|	|	|	|
23+50	0.2198	0.34	Q	|	|	|	|
23+55	0.2198	0.34	Q	|	|	|	|
24+ 0	0.2198	0.34	Q	|	|	|	|
24+ 5	0.1418	0.26	Q	|	|	|	|
24+10	0.0401	0.14	Q	|	|	|	|
24+15	0.0167	0.08	Q	|	|	|	|
24+20	0.0066	0.04	Q	|	|	|	|
24+25	0.0018	0.02	Q	|	|	|	|
24+30	0.0000	0.01	Q	|	|	|	|
24+35	0.0000	0.00	Q	|	|	|	|
24+40	0.0000	0.00	Q	|	|	|	|

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

Number of intervals = 296

Time interval = 5.0 (Min.)

```
                Maximum/Peak flow rate =       16.520 (CFS)
                Total volume =       5.422 (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        2.460 to Point/Station        2.520
**** RETARDING BASIN ROUTING ****
_______________________________________________________________________________

User entry of depth-outflow-storage data
---------------------------------------------------------------------
Total number of inflow hydrograph intervals = 296
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
  2.550      0.001      0.500     -0.001        0.003
  3.000      0.160      0.500      0.158        0.162
  4.000      0.540      0.500      0.538        0.542
  5.000      0.970      0.500      0.968        0.972
  6.000      1.440      0.500      1.438        1.442
  7.000      1.960      0.500      1.958        1.962
  7.500      2.240      0.500      2.238        2.242
  8.000      2.530     25.200      2.443        2.617
  9.000      3.140    128.900      2.696        3.584
---------------------------------------------------------------------
                Hydrograph Detention Basin Routing
---------------------------------------------------------------------

Graph values: 'I'= unit inflow; 'O'=outflow at time shown
---------------------------------------------------------------------
 Time   Inflow  Outflow    Storage                                  Depth
(Hours)  (CFS)   (CFS)     (Ac.Ft) .0       4.1    8.26   12.39   16.52 (Ft.)
 0.083    0.08    0.05      0.000  O       |       |       |       |     0.25
 0.167    0.18    0.15      0.000  O       |       |       |       |     0.76
 0.250    0.20    0.20      0.000  O       |       |       |       |     1.03
 0.333    0.27    0.25      0.000  O       |       |       |       |     1.25
 0.417    0.39    0.35      0.001  O       |       |       |       |     1.78
 0.500    0.46    0.44      0.001  O       |       |       |       |     2.25
 0.583    0.49    0.48      0.001  O       |       |       |       |     2.47
 0.667    0.51    0.50      0.001  O       |       |       |       |     2.55
 0.750    0.51    0.50      0.001  O       |       |       |       |     2.55
 0.833    0.56    0.50      0.001  OI      |       |       |       |     2.55
 0.917    0.62    0.50      0.002  OI      |       |       |       |     2.55
 1.000    0.65    0.50      0.003  OI      |       |       |       |     2.56
 1.083    0.63    0.50      0.004  OI      |       |       |       |     2.56
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1.167	0.58	0.50	0.005	OI				2.56
1.250	0.55	0.50	0.005	OI				2.56
1.333	0.53	0.50	0.005	OI				2.56
1.417	0.52	0.50	0.005	OI				2.56
1.500	0.52	0.50	0.006	OI				2.56
1.583	0.52	0.50	0.006	OI				2.56
1.667	0.52	0.50	0.006	O				2.56
1.750	0.52	0.50	0.006	O				2.56
1.833	0.56	0.50	0.006	OI				2.56
1.917	0.62	0.50	0.007	OI				2.57
2.000	0.65	0.50	0.008	OI				2.57
2.083	0.67	0.50	0.009	OI				2.57
2.167	0.68	0.50	0.010	OI				2.58
2.250	0.68	0.50	0.011	OI				2.58
2.333	0.69	0.50	0.013	OI				2.58
2.417	0.69	0.50	0.014	OI				2.59
2.500	0.69	0.50	0.015	OI				2.59
2.583	0.73	0.50	0.017	OI				2.59
2.667	0.79	0.50	0.018	OI				2.60
2.750	0.82	0.50	0.020	OI				2.60
2.833	0.84	0.50	0.023	OI				2.61
2.917	0.85	0.50	0.025	OI				2.62
3.000	0.86	0.50	0.028	OI				2.63
3.083	0.86	0.50	0.030	OI				2.63
3.167	0.86	0.50	0.032	OI				2.64
3.250	0.86	0.50	0.035	OI				2.65
3.333	0.86	0.50	0.037	OI				2.65
3.417	0.86	0.50	0.040	OI				2.66
3.500	0.86	0.50	0.042	OI				2.67
3.583	0.86	0.50	0.045	OI				2.67
3.667	0.86	0.50	0.047	OI				2.68
3.750	0.86	0.50	0.050	OI				2.69
3.833	0.90	0.50	0.052	OI				2.70
3.917	0.96	0.50	0.055	OI				2.70
4.000	0.99	0.50	0.059	OI				2.71
4.083	1.01	0.50	0.062	OI				2.72
4.167	1.02	0.50	0.066	OI				2.73
4.250	1.03	0.50	0.069	OI				2.74
4.333	1.07	0.50	0.073	O I				2.75
4.417	1.13	0.50	0.077	O I				2.77
4.500	1.16	0.50	0.082	O I				2.78
4.583	1.19	0.50	0.086	O I				2.79
4.667	1.20	0.50	0.091	O I				2.81
4.750	1.20	0.50	0.096	O I				2.82
4.833	1.24	0.50	0.101	O I				2.83
4.917	1.31	0.50	0.106	O I				2.85
5.000	1.34	0.50	0.112	O I				2.86
5.083	1.28	0.50	0.117	O I				2.88
5.167	1.16	0.50	0.122	O I				2.89
5.250	1.11	0.50	0.127	O I				2.91
5.333	1.11	0.50	0.131	O I				2.92
5.417	1.15	0.50	0.135	O I				2.93
5.500	1.17	0.50	0.140	O I				2.94
5.583	1.23	0.50	0.145	O I				2.96
5.667	1.30	0.50	0.150	O I				2.97
5.750	1.33	0.50	0.155	O I				2.99
5.833	1.36	0.50	0.161	O I				3.00
5.917	1.37	0.50	0.167	O I				3.02
6.000	1.37	0.50	0.173	O I				3.03
6.083	1.42	0.50	0.179	O I				3.05
6.167	1.48	0.50	0.186	O I				3.07
6.250	1.51	0.50	0.193	O I				3.09
6.333	1.53	0.50	0.200	O I				3.10

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 6.417    1.54    0.50      0.207  O I     |       |       |       |     3.12
 6.500    1.54    0.50      0.214  O I     |       |       |       |     3.14
 6.583    1.59    0.50      0.221  O  I    |       |       |       |     3.16
 6.667    1.65    0.50      0.229  O  I    |       |       |       |     3.18
 6.750    1.68    0.50      0.237  O  I    |       |       |       |     3.20
 6.833    1.70    0.50      0.245  O  I    |       |       |       |     3.22
 6.917    1.71    0.50      0.254  O  I    |       |       |       |     3.25
 7.000    1.72    0.50      0.262  O  I    |       |       |       |     3.27
 7.083    1.72    0.50      0.270  O  I    |       |       |       |     3.29
 7.167    1.72    0.50      0.279  O  I    |       |       |       |     3.31
 7.250    1.72    0.50      0.287  O  I    |       |       |       |     3.33
 7.333    1.76    0.50      0.296  O  I    |       |       |       |     3.36
 7.417    1.82    0.50      0.305  O  I    |       |       |       |     3.38
 7.500    1.85    0.50      0.314  O  I    |       |       |       |     3.40
 7.583    1.91    0.50      0.323  O  I    |       |       |       |     3.43
 7.667    1.99    0.50      0.333  O  I    |       |       |       |     3.46
 7.750    2.02    0.50      0.344  O  I    |       |       |       |     3.48
 7.833    2.08    0.50      0.354  O   I   |       |       |       |     3.51
 7.917    2.16    0.50      0.366  O   I   |       |       |       |     3.54
 8.000    2.19    0.50      0.377  O   I   |       |       |       |     3.57
 8.083    2.30    0.50      0.389  O   I   |       |       |       |     3.60
 8.167    2.43    0.50      0.402  O   I   |       |       |       |     3.64
 8.250    2.50    0.50      0.415  O   I   |       |       |       |     3.67
 8.333    2.54    0.50      0.429  O   I   |       |       |       |     3.71
 8.417    2.56    0.50      0.443  O   I   |       |       |       |     3.75
 8.500    2.57    0.50      0.458  O   I   |       |       |       |     3.78
 8.583    2.62    0.50      0.472  O    I  |       |       |       |     3.82
 8.667    2.68    0.50      0.487  O    I  |       |       |       |     3.86
 8.750    2.71    0.50      0.502  O    I  |       |       |       |     3.90
 8.833    2.77    0.50      0.518  O    I  |       |       |       |     3.94
 8.917    2.85    0.50      0.533  O    I  |       |       |       |     3.98
 9.000    2.88    0.50      0.550  O    I  |       |       |       |     4.02
 9.083    2.99    0.50      0.566  O    I  |       |       |       |     4.06
 9.167    3.12    0.50      0.584  O     I |       |       |       |     4.10
 9.250    3.19    0.50      0.602  O     I |       |       |       |     4.14
 9.333    3.27    0.50      0.621  O     I |       |       |       |     4.19
 9.417    3.35    0.50      0.640  O     I |       |       |       |     4.23
 9.500    3.39    0.50      0.660  O     I |       |       |       |     4.28
 9.583    3.46    0.50      0.680  O     I |       |       |       |     4.33
 9.667    3.55    0.50      0.701  O     I |       |       |       |     4.37
 9.750    3.63    0.50      0.722  O      I|       |       |       |     4.42
 9.833    3.76    0.50      0.744  O      I|       |       |       |     4.48
 9.917    3.98    0.50      0.768  O      I|       |       |       |     4.53
10.000    4.25    0.50      0.793  O       I       |       |       |     4.59
10.083    4.15    0.50      0.818  O       I       |       |       |     4.65
10.167    3.68    0.50      0.842  O      I|       |       |       |     4.70
10.250    3.24    0.50      0.862  O     I |       |       |       |     4.75
10.333    2.89    0.50      0.880  O    I  |       |       |       |     4.79
10.417    2.72    0.50      0.896  O    I  |       |       |       |     4.83
10.500    2.64    0.50      0.911  O    I  |       |       |       |     4.86
10.583    2.81    0.50      0.926  O    I  |       |       |       |     4.90
10.667    3.14    0.50      0.943  O     I |       |       |       |     4.94
10.750    3.36    0.50      0.962  O     I |       |       |       |     4.98
10.833    3.54    0.50      0.982  O     I |       |       |       |     5.03
10.917    3.65    0.50      1.003  O      I|       |       |       |     5.07
11.000    3.73    0.50      1.025  O      I|       |       |       |     5.12
11.083    3.74    0.50      1.048  O      I|       |       |       |     5.17
11.167    3.65    0.50      1.070  O      I|       |       |       |     5.21
11.250    3.51    0.50      1.091  O     I |       |       |       |     5.26
11.333    3.39    0.50      1.111  O     I |       |       |       |     5.30
11.417    3.36    0.50      1.131  O     I |       |       |       |     5.34
11.500    3.37    0.50      1.151  O     I |       |       |       |     5.38
11.583    3.31    0.50      1.170  O     I |       |       |       |     5.43
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11.667    3.19    0.50      1.189  O     I |        |        |        |     5.47
11.750    3.08    0.50      1.207  O    I  |        |        |        |     5.51
11.833    3.04    0.50      1.225  O    I  |        |        |        |     5.54
11.917    3.06    0.50      1.243  O    I  |        |        |        |     5.58
12.000    3.07    0.50      1.260  O    I  |        |        |        |     5.62
12.083    3.50    0.50      1.280  O     I |        |        |        |     5.66
12.167    4.61    0.50      1.304  O       I        |        |        |     5.71
12.250    6.05    0.50      1.337  O        |  I     |        |        |     5.78
12.333    7.28    0.50      1.380  O        |     I  |        |        |     5.87
12.417    8.03    0.50      1.429  O        |      I |        |        |     5.98
12.500    8.54    0.50      1.483  O        |       I|        |        |     6.08
12.583    9.01    0.50      1.540  O        |        |I       |        |     6.19
12.667    9.51    0.50      1.600  O        |        | I      |        |     6.31
12.750   10.01    0.50      1.664  O        |        |  I     |        |     6.43
12.833   10.47    0.50      1.731  O        |        |   I    |        |     6.56
12.917   10.85    0.50      1.801  O        |        |    I   |        |     6.69
13.000   11.17    0.50      1.873  O        |        |    I   |        |     6.83
13.083   12.09    0.50      1.950  O        |        |      I |        |     6.98
13.167   13.51    0.50      2.035  O        |        |        | I      |     7.13
13.250   14.75    0.50      2.128  O        |        |        |   I    |     7.30
13.333   15.72    0.50      2.230  O        |        |        |     I  |     7.48
13.417   16.24    6.86      2.315  |        |    O   |        |      I |     7.63
13.500   16.52   11.18      2.365  |        |        |    O   |        I     7.72
13.583   15.59   13.39      2.391  |        |        |        |O    I  |     7.76
13.667   13.39   13.89      2.397  |        |        |        |IO      |     7.77
13.750   11.09   13.14      2.388  |        |        |    I   |O       |     7.76
13.833    9.29   11.80      2.373  |        |        |I    O  |        |     7.73
13.917    8.44   10.47      2.357  |        |        |I   O   |        |     7.70
14.000    8.07    9.47      2.345  |        |        |I| O    |        |     7.68
14.083    8.15    8.85      2.338  |        |        |I|O     |        |     7.67
14.167    8.73    8.66      2.336  |        |        | O      |        |     7.67
14.250    9.56    8.88      2.338  |        |        |  |OI    |        |     7.67
14.333   10.19    9.33      2.344  |        |        |  | OI   |        |     7.68
14.417   10.40    9.77      2.349  |        |        |  | O I  |        |     7.69
14.500   10.39   10.05      2.352  |        |        |  |  OI  |        |     7.69
14.583   10.35   10.19      2.354  |        |        |  |  OI  |        |     7.70
14.667   10.34   10.26      2.355  |        |        |  |  OI  |        |     7.70
14.750   10.36   10.30      2.355  |        |        |  |  OI  |        |     7.70
14.833   10.33   10.32      2.355  |        |        |  |  OI  |        |     7.70
14.917   10.21   10.30      2.355  |        |        |  |  O   |        |     7.70
15.000   10.05   10.22      2.354  |        |        |  |  O   |        |     7.70
15.083    9.87   10.10      2.353  |        |        |  |  O   |        |     7.69
15.167    9.67    9.95      2.351  |        |        |  | IO   |        |     7.69
15.250    9.48    9.78      2.349  |        |        |  | O    |        |     7.69
15.333    9.28    9.60      2.347  |        |        |  |IO    |        |     7.68
15.417    9.07    9.41      2.345  |        |        |  |IO    |        |     7.68
15.500    8.87    9.21      2.342  |        |        |  |O     |        |     7.68
15.583    8.49    8.97      2.339  |        |        |  IO     |        |     7.67
15.667    7.82    8.60      2.335  |        |        |  IO     |        |     7.66
15.750    7.01    8.06      2.329  |        |        |I O|     |        |     7.65
15.833    6.38    7.44      2.322  |        |        | I O |     |        |     7.64
15.917    6.10    6.90      2.315  |        |        |I O  |     |        |     7.63
16.000    5.99    6.51      2.311  |        |        | IO  |     |        |     7.62
16.083    5.24    6.10      2.306  |        |        |IO   |     |        |     7.61
16.167    3.85    5.40      2.297  |        |      I| O   |     |        |     7.60
16.250    2.57    4.41      2.286  |        |   I   O |     |        |     7.58
16.333    1.57    3.35      2.273  |        |  I  O |     |        |     7.56
16.417    1.09    2.43      2.263  |        | I O   |     |        |     7.54
16.500    0.86    1.77      2.255  |        |I O    |     |        |     7.53
16.583    0.71    1.33      2.250  |        |IO     |     |        |     7.52
16.667    0.60    1.02      2.246  |        |O      |     |        |     7.51
16.750    0.56    0.82      2.244  |        |O      |     |        |     7.51
16.833    0.53    0.70      2.242  |        |O      |     |        |     7.50
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16.917	0.52	0.62	2.241	|O	|	|	|	7.50
17.000	0.52	0.58	2.241	|O	|	|	|	7.50
17.083	0.60	0.57	2.241	|O	|	|	|	7.50
17.167	0.72	0.61	2.241	|O	|	|	|	7.50
17.250	0.78	0.67	2.242	|O	|	|	|	7.50
17.333	0.82	0.73	2.243	|O	|	|	|	7.50
17.417	0.84	0.78	2.243	|O	|	|	|	7.51
17.500	0.85	0.81	2.244	|O	|	|	|	7.51
17.583	0.86	0.83	2.244	|O	|	|	|	7.51
17.667	0.86	0.84	2.244	|O	|	|	|	7.51
17.750	0.86	0.85	2.244	|O	|	|	|	7.51
17.833	0.82	0.85	2.244	|O	|	|	|	7.51
17.917	0.76	0.82	2.244	|O	|	|	|	7.51
18.000	0.73	0.78	2.243	|O	|	|	|	7.51
18.083	0.71	0.75	2.243	|O	|	|	|	7.51
18.167	0.70	0.73	2.243	|O	|	|	|	7.50
18.250	0.69	0.71	2.242	|O	|	|	|	7.50
18.333	0.69	0.70	2.242	|O	|	|	|	7.50
18.417	0.69	0.70	2.242	|O	|	|	|	7.50
18.500	0.69	0.69	2.242	|O	|	|	|	7.50
18.583	0.65	0.68	2.242	|O	|	|	|	7.50
18.667	0.58	0.65	2.242	|O	|	|	|	7.50
18.750	0.55	0.61	2.241	|O	|	|	|	7.50
18.833	0.49	0.57	2.241	IO	|	|	|	7.50
18.917	0.42	0.52	2.240	IO	|	|	|	7.50
19.000	0.39	0.50	2.239	O	|	|	|	7.50
19.083	0.40	0.50	2.239	O	|	|	|	7.50
19.167	0.45	0.50	2.238	O	|	|	|	7.50
19.250	0.48	0.50	2.238	O	|	|	|	7.50
19.333	0.54	0.50	2.238	OI	|	|	|	7.50
19.417	0.61	0.50	2.239	OI	|	|	|	7.50
19.500	0.65	0.50	2.240	OI	|	|	|	7.50
19.583	0.63	0.53	2.240	|O	|	|	|	7.50
19.667	0.58	0.56	2.241	|O	|	|	|	7.50
19.750	0.55	0.56	2.241	|O	|	|	|	7.50
19.833	0.49	0.54	2.241	IO	|	|	|	7.50
19.917	0.42	0.50	2.240	O	|	|	|	7.50
20.000	0.39	0.50	2.239	O	|	|	|	7.50
20.083	0.40	0.50	2.239	O	|	|	|	7.50
20.167	0.45	0.50	2.238	O	|	|	|	7.50
20.250	0.48	0.50	2.238	O	|	|	|	7.50
20.333	0.50	0.50	2.238	O	|	|	|	7.50
20.417	0.51	0.50	2.238	O	|	|	|	7.50
20.500	0.51	0.50	2.238	O	|	|	|	7.50
20.583	0.51	0.50	2.238	O	|	|	|	7.50
20.667	0.52	0.50	2.238	O	|	|	|	7.50
20.750	0.52	0.50	2.238	O	|	|	|	7.50
20.833	0.47	0.50	2.238	O	|	|	|	7.50
20.917	0.41	0.50	2.238	O	|	|	|	7.50
21.000	0.38	0.50	2.237	O	|	|	|	7.49
21.083	0.40	0.50	2.236	O	|	|	|	7.49
21.167	0.45	0.50	2.236	O	|	|	|	7.49
21.250	0.48	0.50	2.236	O	|	|	|	7.49
21.333	0.46	0.50	2.235	O	|	|	|	7.49
21.417	0.41	0.50	2.235	O	|	|	|	7.49
21.500	0.38	0.50	2.234	O	|	|	|	7.49
21.583	0.40	0.50	2.233	O	|	|	|	7.49
21.667	0.45	0.50	2.233	O	|	|	|	7.49
21.750	0.48	0.50	2.233	O	|	|	|	7.49
21.833	0.46	0.50	2.233	O	|	|	|	7.49
21.917	0.41	0.50	2.232	O	|	|	|	7.49
22.000	0.38	0.50	2.231	O	|	|	|	7.48
22.083	0.40	0.50	2.231	O	|	|	|	7.48

22.167	0.45	0.50	2.230	O	|	|	|	7.48
22.250	0.48	0.50	2.230	O	|	|	|	7.48
22.333	0.46	0.50	2.230	O	|	|	|	7.48
22.417	0.41	0.50	2.229	O	|	|	|	7.48
22.500	0.38	0.50	2.228	O	|	|	|	7.48
22.583	0.36	0.50	2.228	O	|	|	|	7.48
22.667	0.35	0.50	2.227	O	|	|	|	7.48
22.750	0.35	0.50	2.226	O	|	|	|	7.47
22.833	0.34	0.50	2.224	O	|	|	|	7.47
22.917	0.34	0.50	2.223	O	|	|	|	7.47
23.000	0.34	0.50	2.222	O	|	|	|	7.47
23.083	0.34	0.50	2.221	O	|	|	|	7.47
23.167	0.34	0.50	2.220	O	|	|	|	7.46
23.250	0.34	0.50	2.219	O	|	|	|	7.46
23.333	0.34	0.50	2.218	O	|	|	|	7.46
23.417	0.34	0.50	2.217	O	|	|	|	7.46
23.500	0.34	0.50	2.216	O	|	|	|	7.46
23.583	0.34	0.50	2.215	O	|	|	|	7.45
23.667	0.34	0.50	2.214	O	|	|	|	7.45
23.750	0.34	0.50	2.213	O	|	|	|	7.45
23.833	0.34	0.50	2.212	O	|	|	|	7.45
23.917	0.34	0.50	2.210	O	|	|	|	7.45
24.000	0.34	0.50	2.209	O	|	|	|	7.45
24.083	0.26	0.50	2.208	O	|	|	|	7.44
24.167	0.14	0.50	2.206	O	|	|	|	7.44
24.250	0.08	0.50	2.203	O	|	|	|	7.43
24.333	0.04	0.50	2.200	O	|	|	|	7.43
24.417	0.02	0.50	2.197	O	|	|	|	7.42
24.500	0.01	0.50	2.194	O	|	|	|	7.42
24.583	0.00	0.50	2.190	O	|	|	|	7.41
24.667	0.00	0.50	2.187	O	|	|	|	7.40
24.750	0.00	0.50	2.183	O	|	|	|	7.40
24.833	0.00	0.50	2.180	O	|	|	|	7.39
24.917	0.00	0.50	2.176	O	|	|	|	7.39
25.000	0.00	0.50	2.173	O	|	|	|	7.38
25.083	0.00	0.50	2.169	O	|	|	|	7.37
25.167	0.00	0.50	2.166	O	|	|	|	7.37
25.250	0.00	0.50	2.163	O	|	|	|	7.36
25.333	0.00	0.50	2.159	O	|	|	|	7.36
25.417	0.00	0.50	2.156	O	|	|	|	7.35
25.500	0.00	0.50	2.152	O	|	|	|	7.34
25.583	0.00	0.50	2.149	O	|	|	|	7.34
25.667	0.00	0.50	2.145	O	|	|	|	7.33
25.750	0.00	0.50	2.142	O	|	|	|	7.32
25.833	0.00	0.50	2.138	O	|	|	|	7.32
25.917	0.00	0.50	2.135	O	|	|	|	7.31
26.000	0.00	0.50	2.132	O	|	|	|	7.31
26.083	0.00	0.50	2.128	O	|	|	|	7.30
26.167	0.00	0.50	2.125	O	|	|	|	7.29
26.250	0.00	0.50	2.121	O	|	|	|	7.29
26.333	0.00	0.50	2.118	O	|	|	|	7.28
26.417	0.00	0.50	2.114	O	|	|	|	7.28
26.500	0.00	0.50	2.111	O	|	|	|	7.27
26.583	0.00	0.50	2.108	O	|	|	|	7.26
26.667	0.00	0.50	2.104	O	|	|	|	7.26
26.750	0.00	0.50	2.101	O	|	|	|	7.25
26.833	0.00	0.50	2.097	O	|	|	|	7.24
26.917	0.00	0.50	2.094	O	|	|	|	7.24
27.000	0.00	0.50	2.090	O	|	|	|	7.23
27.083	0.00	0.50	2.087	O	|	|	|	7.23
27.167	0.00	0.50	2.083	O	|	|	|	7.22
27.250	0.00	0.50	2.080	O	|	|	|	7.21
27.333	0.00	0.50	2.077	O	|	|	|	7.21

27.417	0.00	0.50	2.073	O	|	|	|	7.20
27.500	0.00	0.50	2.070	O	|	|	|	7.20
27.583	0.00	0.50	2.066	O	|	|	|	7.19
27.667	0.00	0.50	2.063	O	|	|	|	7.18
27.750	0.00	0.50	2.059	O	|	|	|	7.18
27.833	0.00	0.50	2.056	O	|	|	|	7.17
27.917	0.00	0.50	2.052	O	|	|	|	7.17
28.000	0.00	0.50	2.049	O	|	|	|	7.16
28.083	0.00	0.50	2.046	O	|	|	|	7.15
28.167	0.00	0.50	2.042	O	|	|	|	7.15
28.250	0.00	0.50	2.039	O	|	|	|	7.14
28.333	0.00	0.50	2.035	O	|	|	|	7.13
28.417	0.00	0.50	2.032	O	|	|	|	7.13
28.500	0.00	0.50	2.028	O	|	|	|	7.12
28.583	0.00	0.50	2.025	O	|	|	|	7.12
28.667	0.00	0.50	2.021	O	|	|	|	7.11
28.750	0.00	0.50	2.018	O	|	|	|	7.10
28.833	0.00	0.50	2.015	O	|	|	|	7.10
28.917	0.00	0.50	2.011	O	|	|	|	7.09
29.000	0.00	0.50	2.008	O	|	|	|	7.09
29.083	0.00	0.50	2.004	O	|	|	|	7.08
29.167	0.00	0.50	2.001	O	|	|	|	7.07
29.250	0.00	0.50	1.997	O	|	|	|	7.07
29.333	0.00	0.50	1.994	O	|	|	|	7.06
29.417	0.00	0.50	1.990	O	|	|	|	7.05
29.500	0.00	0.50	1.987	O	|	|	|	7.05
29.583	0.00	0.50	1.984	O	|	|	|	7.04
29.667	0.00	0.50	1.980	O	|	|	|	7.04
29.750	0.00	0.50	1.977	O	|	|	|	7.03
29.833	0.00	0.50	1.973	O	|	|	|	7.02
29.917	0.00	0.50	1.970	O	|	|	|	7.02
30.000	0.00	0.50	1.966	O	|	|	|	7.01
30.083	0.00	0.50	1.963	O	|	|	|	7.01
30.167	0.00	0.50	1.959	O	|	|	|	7.00
30.250	0.00	0.50	1.956	O	|	|	|	6.99
30.333	0.00	0.50	1.953	O	|	|	|	6.99
30.417	0.00	0.50	1.949	O	|	|	|	6.98
30.500	0.00	0.50	1.946	O	|	|	|	6.97
30.583	0.00	0.50	1.942	O	|	|	|	6.97
30.667	0.00	0.50	1.939	O	|	|	|	6.96
30.750	0.00	0.50	1.935	O	|	|	|	6.95
30.833	0.00	0.50	1.932	O	|	|	|	6.95
30.917	0.00	0.50	1.928	O	|	|	|	6.94
31.000	0.00	0.50	1.925	O	|	|	|	6.93
31.083	0.00	0.50	1.922	O	|	|	|	6.93
31.167	0.00	0.50	1.918	O	|	|	|	6.92
31.250	0.00	0.50	1.915	O	|	|	|	6.91
31.333	0.00	0.50	1.911	O	|	|	|	6.91
31.417	0.00	0.50	1.908	O	|	|	|	6.90
31.500	0.00	0.50	1.904	O	|	|	|	6.89
31.583	0.00	0.50	1.901	O	|	|	|	6.89
31.667	0.00	0.50	1.897	O	|	|	|	6.88
31.750	0.00	0.50	1.894	O	|	|	|	6.87
31.833	0.00	0.50	1.891	O	|	|	|	6.87
31.917	0.00	0.50	1.887	O	|	|	|	6.86
32.000	0.00	0.50	1.884	O	|	|	|	6.85
32.083	0.00	0.50	1.880	O	|	|	|	6.85
32.167	0.00	0.50	1.877	O	|	|	|	6.84
32.250	0.00	0.50	1.873	O	|	|	|	6.83
32.333	0.00	0.50	1.870	O	|	|	|	6.83
32.417	0.00	0.50	1.866	O	|	|	|	6.82
32.500	0.00	0.50	1.863	O	|	|	|	6.81
32.583	0.00	0.50	1.860	O	|	|	|	6.81

32.667	0.00	0.50	1.856	O	|	|	|	6.80
32.750	0.00	0.50	1.853	O	|	|	|	6.79
32.833	0.00	0.50	1.849	O	|	|	|	6.79
32.917	0.00	0.50	1.846	O	|	|	|	6.78
33.000	0.00	0.50	1.842	O	|	|	|	6.77
33.083	0.00	0.50	1.839	O	|	|	|	6.77
33.167	0.00	0.50	1.835	O	|	|	|	6.76
33.250	0.00	0.50	1.832	O	|	|	|	6.75
33.333	0.00	0.50	1.829	O	|	|	|	6.75
33.417	0.00	0.50	1.825	O	|	|	|	6.74
33.500	0.00	0.50	1.822	O	|	|	|	6.73
33.583	0.00	0.50	1.818	O	|	|	|	6.73
33.667	0.00	0.50	1.815	O	|	|	|	6.72
33.750	0.00	0.50	1.811	O	|	|	|	6.71
33.833	0.00	0.50	1.808	O	|	|	|	6.71
33.917	0.00	0.50	1.804	O	|	|	|	6.70
34.000	0.00	0.50	1.801	O	|	|	|	6.69
34.083	0.00	0.50	1.798	O	|	|	|	6.69
34.167	0.00	0.50	1.794	O	|	|	|	6.68
34.250	0.00	0.50	1.791	O	|	|	|	6.67
34.333	0.00	0.50	1.787	O	|	|	|	6.67
34.417	0.00	0.50	1.784	O	|	|	|	6.66
34.500	0.00	0.50	1.780	O	|	|	|	6.65
34.583	0.00	0.50	1.777	O	|	|	|	6.65
34.667	0.00	0.50	1.773	O	|	|	|	6.64
34.750	0.00	0.50	1.770	O	|	|	|	6.63
34.833	0.00	0.50	1.767	O	|	|	|	6.63
34.917	0.00	0.50	1.763	O	|	|	|	6.62
35.000	0.00	0.50	1.760	O	|	|	|	6.61
35.083	0.00	0.50	1.756	O	|	|	|	6.61
35.167	0.00	0.50	1.753	O	|	|	|	6.60
35.250	0.00	0.50	1.749	O	|	|	|	6.59
35.333	0.00	0.50	1.746	O	|	|	|	6.59
35.417	0.00	0.50	1.742	O	|	|	|	6.58
35.500	0.00	0.50	1.739	O	|	|	|	6.58
35.583	0.00	0.50	1.736	O	|	|	|	6.57
35.667	0.00	0.50	1.732	O	|	|	|	6.56
35.750	0.00	0.50	1.729	O	|	|	|	6.56
35.833	0.00	0.50	1.725	O	|	|	|	6.55
35.917	0.00	0.50	1.722	O	|	|	|	6.54
36.000	0.00	0.50	1.718	O	|	|	|	6.54
36.083	0.00	0.50	1.715	O	|	|	|	6.53
36.167	0.00	0.50	1.711	O	|	|	|	6.52
36.250	0.00	0.50	1.708	O	|	|	|	6.52
36.333	0.00	0.50	1.705	O	|	|	|	6.51
36.417	0.00	0.50	1.701	O	|	|	|	6.50
36.500	0.00	0.50	1.698	O	|	|	|	6.50
36.583	0.00	0.50	1.694	O	|	|	|	6.49
36.667	0.00	0.50	1.691	O	|	|	|	6.48
36.750	0.00	0.50	1.687	O	|	|	|	6.48
36.833	0.00	0.50	1.684	O	|	|	|	6.47
36.917	0.00	0.50	1.681	O	|	|	|	6.46
37.000	0.00	0.50	1.677	O	|	|	|	6.46
37.083	0.00	0.50	1.674	O	|	|	|	6.45
37.167	0.00	0.50	1.670	O	|	|	|	6.44
37.250	0.00	0.50	1.667	O	|	|	|	6.44
37.333	0.00	0.50	1.663	O	|	|	|	6.43
37.417	0.00	0.50	1.660	O	|	|	|	6.42
37.500	0.00	0.50	1.656	O	|	|	|	6.42
37.583	0.00	0.50	1.653	O	|	|	|	6.41
37.667	0.00	0.50	1.650	O	|	|	|	6.40
37.750	0.00	0.50	1.646	O	|	|	|	6.40
37.833	0.00	0.50	1.643	O	|	|	|	6.39

37.917	0.00	0.50	1.639	O	|	|	|	6.38
38.000	0.00	0.50	1.636	O	|	|	|	6.38
38.083	0.00	0.50	1.632	O	|	|	|	6.37
38.167	0.00	0.50	1.629	O	|	|	|	6.36
38.250	0.00	0.50	1.625	O	|	|	|	6.36
38.333	0.00	0.50	1.622	O	|	|	|	6.35
38.417	0.00	0.50	1.619	O	|	|	|	6.34
38.500	0.00	0.50	1.615	O	|	|	|	6.34
38.583	0.00	0.50	1.612	O	|	|	|	6.33
38.667	0.00	0.50	1.608	O	|	|	|	6.32
38.750	0.00	0.50	1.605	O	|	|	|	6.32
38.833	0.00	0.50	1.601	O	|	|	|	6.31
38.917	0.00	0.50	1.598	O	|	|	|	6.30
39.000	0.00	0.50	1.594	O	|	|	|	6.30
39.083	0.00	0.50	1.591	O	|	|	|	6.29
39.167	0.00	0.50	1.588	O	|	|	|	6.28
39.250	0.00	0.50	1.584	O	|	|	|	6.28
39.333	0.00	0.50	1.581	O	|	|	|	6.27
39.417	0.00	0.50	1.577	O	|	|	|	6.26
39.500	0.00	0.50	1.574	O	|	|	|	6.26
39.583	0.00	0.50	1.570	O	|	|	|	6.25
39.667	0.00	0.50	1.567	O	|	|	|	6.24
39.750	0.00	0.50	1.563	O	|	|	|	6.24
39.833	0.00	0.50	1.560	O	|	|	|	6.23
39.917	0.00	0.50	1.557	O	|	|	|	6.22
40.000	0.00	0.50	1.553	O	|	|	|	6.22
40.083	0.00	0.50	1.550	O	|	|	|	6.21
40.167	0.00	0.50	1.546	O	|	|	|	6.20
40.250	0.00	0.50	1.543	O	|	|	|	6.20
40.333	0.00	0.50	1.539	O	|	|	|	6.19
40.417	0.00	0.50	1.536	O	|	|	|	6.18
40.500	0.00	0.50	1.532	O	|	|	|	6.18
40.583	0.00	0.50	1.529	O	|	|	|	6.17
40.667	0.00	0.50	1.526	O	|	|	|	6.16
40.750	0.00	0.50	1.522	O	|	|	|	6.16
40.833	0.00	0.50	1.519	O	|	|	|	6.15
40.917	0.00	0.50	1.515	O	|	|	|	6.14
41.000	0.00	0.50	1.512	O	|	|	|	6.14
41.083	0.00	0.50	1.508	O	|	|	|	6.13
41.167	0.00	0.50	1.505	O	|	|	|	6.12
41.250	0.00	0.50	1.501	O	|	|	|	6.12
41.333	0.00	0.50	1.498	O	|	|	|	6.11
41.417	0.00	0.50	1.495	O	|	|	|	6.10
41.500	0.00	0.50	1.491	O	|	|	|	6.10
41.583	0.00	0.50	1.488	O	|	|	|	6.09
41.667	0.00	0.50	1.484	O	|	|	|	6.09
41.750	0.00	0.50	1.481	O	|	|	|	6.08
41.833	0.00	0.50	1.477	O	|	|	|	6.07
41.917	0.00	0.50	1.474	O	|	|	|	6.07
42.000	0.00	0.50	1.470	O	|	|	|	6.06
42.083	0.00	0.50	1.467	O	|	|	|	6.05
42.167	0.00	0.50	1.464	O	|	|	|	6.05
42.250	0.00	0.50	1.460	O	|	|	|	6.04
42.333	0.00	0.50	1.457	O	|	|	|	6.03
42.417	0.00	0.50	1.453	O	|	|	|	6.03
42.500	0.00	0.50	1.450	O	|	|	|	6.02
42.583	0.00	0.50	1.446	O	|	|	|	6.01
42.667	0.00	0.50	1.443	O	|	|	|	6.01
42.750	0.00	0.50	1.439	O	|	|	|	6.00
42.833	0.00	0.50	1.436	O	|	|	|	5.99
42.917	0.00	0.50	1.433	O	|	|	|	5.98
43.000	0.00	0.50	1.429	O	|	|	|	5.98
43.083	0.00	0.50	1.426	O	|	|	|	5.97

43.167	0.00	0.50	1.422	O	|	|	|	5.96
43.250	0.00	0.50	1.419	O	|	|	|	5.95
43.333	0.00	0.50	1.415	O	|	|	|	5.95
43.417	0.00	0.50	1.412	O	|	|	|	5.94
43.500	0.00	0.50	1.408	O	|	|	|	5.93
43.583	0.00	0.50	1.405	O	|	|	|	5.93
43.667	0.00	0.50	1.402	O	|	|	|	5.92
43.750	0.00	0.50	1.398	O	|	|	|	5.91
43.833	0.00	0.50	1.395	O	|	|	|	5.90
43.917	0.00	0.50	1.391	O	|	|	|	5.90
44.000	0.00	0.50	1.388	O	|	|	|	5.89
44.083	0.00	0.50	1.384	O	|	|	|	5.88
44.167	0.00	0.50	1.381	O	|	|	|	5.87
44.250	0.00	0.50	1.377	O	|	|	|	5.87
44.333	0.00	0.50	1.374	O	|	|	|	5.86
44.417	0.00	0.50	1.371	O	|	|	|	5.85
44.500	0.00	0.50	1.367	O	|	|	|	5.84
44.583	0.00	0.50	1.364	O	|	|	|	5.84
44.667	0.00	0.50	1.360	O	|	|	|	5.83
44.750	0.00	0.50	1.357	O	|	|	|	5.82
44.833	0.00	0.50	1.353	O	|	|	|	5.82
44.917	0.00	0.50	1.350	O	|	|	|	5.81
45.000	0.00	0.50	1.346	O	|	|	|	5.80
45.083	0.00	0.50	1.343	O	|	|	|	5.79
45.167	0.00	0.50	1.340	O	|	|	|	5.79
45.250	0.00	0.50	1.336	O	|	|	|	5.78
45.333	0.00	0.50	1.333	O	|	|	|	5.77
45.417	0.00	0.50	1.329	O	|	|	|	5.76
45.500	0.00	0.50	1.326	O	|	|	|	5.76
45.583	0.00	0.50	1.322	O	|	|	|	5.75
45.667	0.00	0.50	1.319	O	|	|	|	5.74
45.750	0.00	0.50	1.315	O	|	|	|	5.74
45.833	0.00	0.50	1.312	O	|	|	|	5.73
45.917	0.00	0.50	1.309	O	|	|	|	5.72
46.000	0.00	0.50	1.305	O	|	|	|	5.71
46.083	0.00	0.50	1.302	O	|	|	|	5.71
46.167	0.00	0.50	1.298	O	|	|	|	5.70
46.250	0.00	0.50	1.295	O	|	|	|	5.69
46.333	0.00	0.50	1.291	O	|	|	|	5.68
46.417	0.00	0.50	1.288	O	|	|	|	5.68
46.500	0.00	0.50	1.285	O	|	|	|	5.67
46.583	0.00	0.50	1.281	O	|	|	|	5.66
46.667	0.00	0.50	1.278	O	|	|	|	5.65
46.750	0.00	0.50	1.274	O	|	|	|	5.65
46.833	0.00	0.50	1.271	O	|	|	|	5.64
46.917	0.00	0.50	1.267	O	|	|	|	5.63
47.000	0.00	0.50	1.264	O	|	|	|	5.63
47.083	0.00	0.50	1.260	O	|	|	|	5.62
47.167	0.00	0.50	1.257	O	|	|	|	5.61
47.250	0.00	0.50	1.254	O	|	|	|	5.60
47.333	0.00	0.50	1.250	O	|	|	|	5.60
47.417	0.00	0.50	1.247	O	|	|	|	5.59
47.500	0.00	0.50	1.243	O	|	|	|	5.58
47.583	0.00	0.50	1.240	O	|	|	|	5.57
47.667	0.00	0.50	1.236	O	|	|	|	5.57
47.750	0.00	0.50	1.233	O	|	|	|	5.56
47.833	0.00	0.50	1.229	O	|	|	|	5.55
47.917	0.00	0.50	1.226	O	|	|	|	5.54
48.000	0.00	0.50	1.223	O	|	|	|	5.54
48.083	0.00	0.50	1.219	O	|	|	|	5.53
48.167	0.00	0.50	1.216	O	|	|	|	5.52
48.250	0.00	0.50	1.212	O	|	|	|	5.52
48.333	0.00	0.50	1.209	O	|	|	|	5.51

48.417	0.00	0.50	1.205	O	|	|	|	5.50
48.500	0.00	0.50	1.202	O	|	|	|	5.49
48.583	0.00	0.50	1.198	O	|	|	|	5.49
48.667	0.00	0.50	1.195	O	|	|	|	5.48
48.750	0.00	0.50	1.192	O	|	|	|	5.47
48.833	0.00	0.50	1.188	O	|	|	|	5.46
48.917	0.00	0.50	1.185	O	|	|	|	5.46
49.000	0.00	0.50	1.181	O	|	|	|	5.45
49.083	0.00	0.50	1.178	O	|	|	|	5.44
49.167	0.00	0.50	1.174	O	|	|	|	5.43
49.250	0.00	0.50	1.171	O	|	|	|	5.43
49.333	0.00	0.50	1.167	O	|	|	|	5.42
49.417	0.00	0.50	1.164	O	|	|	|	5.41
49.500	0.00	0.50	1.161	O	|	|	|	5.41
49.583	0.00	0.50	1.157	O	|	|	|	5.40
49.667	0.00	0.50	1.154	O	|	|	|	5.39
49.750	0.00	0.50	1.150	O	|	|	|	5.38
49.833	0.00	0.50	1.147	O	|	|	|	5.38
49.917	0.00	0.50	1.143	O	|	|	|	5.37
50.000	0.00	0.50	1.140	O	|	|	|	5.36
50.083	0.00	0.50	1.136	O	|	|	|	5.35
50.167	0.00	0.50	1.133	O	|	|	|	5.35
50.250	0.00	0.50	1.130	O	|	|	|	5.34
50.333	0.00	0.50	1.126	O	|	|	|	5.33
50.417	0.00	0.50	1.123	O	|	|	|	5.32
50.500	0.00	0.50	1.119	O	|	|	|	5.32
50.583	0.00	0.50	1.116	O	|	|	|	5.31
50.667	0.00	0.50	1.112	O	|	|	|	5.30
50.750	0.00	0.50	1.109	O	|	|	|	5.30
50.833	0.00	0.50	1.105	O	|	|	|	5.29
50.917	0.00	0.50	1.102	O	|	|	|	5.28
51.000	0.00	0.50	1.099	O	|	|	|	5.27
51.083	0.00	0.50	1.095	O	|	|	|	5.27
51.167	0.00	0.50	1.092	O	|	|	|	5.26
51.250	0.00	0.50	1.088	O	|	|	|	5.25
51.333	0.00	0.50	1.085	O	|	|	|	5.24
51.417	0.00	0.50	1.081	O	|	|	|	5.24
51.500	0.00	0.50	1.078	O	|	|	|	5.23
51.583	0.00	0.50	1.074	O	|	|	|	5.22
51.667	0.00	0.50	1.071	O	|	|	|	5.21
51.750	0.00	0.50	1.068	O	|	|	|	5.21
51.833	0.00	0.50	1.064	O	|	|	|	5.20
51.917	0.00	0.50	1.061	O	|	|	|	5.19
52.000	0.00	0.50	1.057	O	|	|	|	5.19
52.083	0.00	0.50	1.054	O	|	|	|	5.18
52.167	0.00	0.50	1.050	O	|	|	|	5.17
52.250	0.00	0.50	1.047	O	|	|	|	5.16
52.333	0.00	0.50	1.043	O	|	|	|	5.16
52.417	0.00	0.50	1.040	O	|	|	|	5.15
52.500	0.00	0.50	1.037	O	|	|	|	5.14
52.583	0.00	0.50	1.033	O	|	|	|	5.13
52.667	0.00	0.50	1.030	O	|	|	|	5.13
52.750	0.00	0.50	1.026	O	|	|	|	5.12
52.833	0.00	0.50	1.023	O	|	|	|	5.11
52.917	0.00	0.50	1.019	O	|	|	|	5.10
53.000	0.00	0.50	1.016	O	|	|	|	5.10
53.083	0.00	0.50	1.012	O	|	|	|	5.09
53.167	0.00	0.50	1.009	O	|	|	|	5.08
53.250	0.00	0.50	1.006	O	|	|	|	5.08
53.333	0.00	0.50	1.002	O	|	|	|	5.07
53.417	0.00	0.50	0.999	O	|	|	|	5.06
53.500	0.00	0.50	0.995	O	|	|	|	5.05
53.583	0.00	0.50	0.992	O	|	|	|	5.05

53.667	0.00	0.50	0.988	O				5.04
53.750	0.00	0.50	0.985	O				5.03
53.833	0.00	0.50	0.981	O				5.02
53.917	0.00	0.50	0.978	O				5.02
54.000	0.00	0.50	0.975	O				5.01
54.083	0.00	0.50	0.971	O				5.00
54.167	0.00	0.50	0.968	O				4.99
54.250	0.00	0.50	0.964	O				4.99
54.333	0.00	0.50	0.961	O				4.98
54.417	0.00	0.50	0.957	O				4.97
54.500	0.00	0.50	0.954	O				4.96
54.583	0.00	0.50	0.950	O				4.95
54.667	0.00	0.50	0.947	O				4.95
54.750	0.00	0.50	0.944	O				4.94
54.833	0.00	0.50	0.940	O				4.93
54.917	0.00	0.50	0.937	O				4.92
55.000	0.00	0.50	0.933	O				4.91
55.083	0.00	0.50	0.930	O				4.91
55.167	0.00	0.50	0.926	O				4.90
55.250	0.00	0.50	0.923	O				4.89
55.333	0.00	0.50	0.919	O				4.88
55.417	0.00	0.50	0.916	O				4.87
55.500	0.00	0.50	0.913	O				4.87
55.583	0.00	0.50	0.909	O				4.86
55.667	0.00	0.50	0.906	O				4.85
55.750	0.00	0.50	0.902	O				4.84
55.833	0.00	0.50	0.899	O				4.83
55.917	0.00	0.50	0.895	O				4.83
56.000	0.00	0.50	0.892	O				4.82
56.083	0.00	0.50	0.888	O				4.81
56.167	0.00	0.50	0.885	O				4.80
56.250	0.00	0.50	0.882	O				4.79
56.333	0.00	0.50	0.878	O				4.79
56.417	0.00	0.50	0.875	O				4.78
56.500	0.00	0.50	0.871	O				4.77
56.583	0.00	0.50	0.868	O				4.76
56.667	0.00	0.50	0.864	O				4.75
56.750	0.00	0.50	0.861	O				4.75
56.833	0.00	0.50	0.858	O				4.74
56.917	0.00	0.50	0.854	O				4.73
57.000	0.00	0.50	0.851	O				4.72
57.083	0.00	0.50	0.847	O				4.71
57.167	0.00	0.50	0.844	O				4.71
57.250	0.00	0.50	0.840	O				4.70
57.333	0.00	0.50	0.837	O				4.69
57.417	0.00	0.50	0.833	O				4.68
57.500	0.00	0.50	0.830	O				4.67
57.583	0.00	0.50	0.827	O				4.67
57.667	0.00	0.50	0.823	O				4.66
57.750	0.00	0.50	0.820	O				4.65
57.833	0.00	0.50	0.816	O				4.64
57.917	0.00	0.50	0.813	O				4.63
58.000	0.00	0.50	0.809	O				4.63
58.083	0.00	0.50	0.806	O				4.62
58.167	0.00	0.50	0.802	O				4.61
58.250	0.00	0.50	0.799	O				4.60
58.333	0.00	0.50	0.796	O				4.59
58.417	0.00	0.50	0.792	O				4.59
58.500	0.00	0.50	0.789	O				4.58
58.583	0.00	0.50	0.785	O				4.57
58.667	0.00	0.50	0.782	O				4.56
58.750	0.00	0.50	0.778	O				4.55
58.833	0.00	0.50	0.775	O				4.55

58.917	0.00	0.50	0.771	O	|	|	|	4.54
59.000	0.00	0.50	0.768	O	|	|	|	4.53
59.083	0.00	0.50	0.765	O	|	|	|	4.52
59.167	0.00	0.50	0.761	O	|	|	|	4.51
59.250	0.00	0.50	0.758	O	|	|	|	4.51
59.333	0.00	0.50	0.754	O	|	|	|	4.50
59.417	0.00	0.50	0.751	O	|	|	|	4.49
59.500	0.00	0.50	0.747	O	|	|	|	4.48
59.583	0.00	0.50	0.744	O	|	|	|	4.47
59.667	0.00	0.50	0.740	O	|	|	|	4.47
59.750	0.00	0.50	0.737	O	|	|	|	4.46
59.833	0.00	0.50	0.734	O	|	|	|	4.45
59.917	0.00	0.50	0.730	O	|	|	|	4.44
60.000	0.00	0.50	0.727	O	|	|	|	4.43
60.083	0.00	0.50	0.723	O	|	|	|	4.43
60.167	0.00	0.50	0.720	O	|	|	|	4.42
60.250	0.00	0.50	0.716	O	|	|	|	4.41
60.333	0.00	0.50	0.713	O	|	|	|	4.40
60.417	0.00	0.50	0.709	O	|	|	|	4.39
60.500	0.00	0.50	0.706	O	|	|	|	4.39
60.583	0.00	0.50	0.703	O	|	|	|	4.38
60.667	0.00	0.50	0.699	O	|	|	|	4.37
60.750	0.00	0.50	0.696	O	|	|	|	4.36
60.833	0.00	0.50	0.692	O	|	|	|	4.35
60.917	0.00	0.50	0.689	O	|	|	|	4.35
61.000	0.00	0.50	0.685	O	|	|	|	4.34
61.083	0.00	0.50	0.682	O	|	|	|	4.33
61.167	0.00	0.50	0.678	O	|	|	|	4.32
61.250	0.00	0.50	0.675	O	|	|	|	4.31
61.333	0.00	0.50	0.672	O	|	|	|	4.31
61.417	0.00	0.50	0.668	O	|	|	|	4.30
61.500	0.00	0.50	0.665	O	|	|	|	4.29
61.583	0.00	0.50	0.661	O	|	|	|	4.28
61.667	0.00	0.50	0.658	O	|	|	|	4.27
61.750	0.00	0.50	0.654	O	|	|	|	4.27
61.833	0.00	0.50	0.651	O	|	|	|	4.26
61.917	0.00	0.50	0.647	O	|	|	|	4.25
62.000	0.00	0.50	0.644	O	|	|	|	4.24
62.083	0.00	0.50	0.641	O	|	|	|	4.23
62.167	0.00	0.50	0.637	O	|	|	|	4.23
62.250	0.00	0.50	0.634	O	|	|	|	4.22
62.333	0.00	0.50	0.630	O	|	|	|	4.21
62.417	0.00	0.50	0.627	O	|	|	|	4.20
62.500	0.00	0.50	0.623	O	|	|	|	4.19
62.583	0.00	0.50	0.620	O	|	|	|	4.19
62.667	0.00	0.50	0.616	O	|	|	|	4.18
62.750	0.00	0.50	0.613	O	|	|	|	4.17
62.833	0.00	0.50	0.610	O	|	|	|	4.16
62.917	0.00	0.50	0.606	O	|	|	|	4.15
63.000	0.00	0.50	0.603	O	|	|	|	4.15
63.083	0.00	0.50	0.599	O	|	|	|	4.14
63.167	0.00	0.50	0.596	O	|	|	|	4.13
63.250	0.00	0.50	0.592	O	|	|	|	4.12
63.333	0.00	0.50	0.589	O	|	|	|	4.11
63.417	0.00	0.50	0.585	O	|	|	|	4.11
63.500	0.00	0.50	0.582	O	|	|	|	4.10
63.583	0.00	0.50	0.579	O	|	|	|	4.09
63.667	0.00	0.50	0.575	O	|	|	|	4.08
63.750	0.00	0.50	0.572	O	|	|	|	4.07
63.833	0.00	0.50	0.568	O	|	|	|	4.07
63.917	0.00	0.50	0.565	O	|	|	|	4.06
64.000	0.00	0.50	0.561	O	|	|	|	4.05
64.083	0.00	0.50	0.558	O	|	|	|	4.04

64.167	0.00	0.50	0.554	O	|	|	|	4.03
64.250	0.00	0.50	0.551	O	|	|	|	4.03
64.333	0.00	0.50	0.548	O	|	|	|	4.02
64.417	0.00	0.50	0.544	O	|	|	|	4.01
64.500	0.00	0.50	0.541	O	|	|	|	4.00
64.583	0.00	0.50	0.537	O	|	|	|	3.99
64.667	0.00	0.50	0.534	O	|	|	|	3.98
64.750	0.00	0.50	0.530	O	|	|	|	3.97
64.833	0.00	0.50	0.527	O	|	|	|	3.97
64.917	0.00	0.50	0.523	O	|	|	|	3.96
65.000	0.00	0.50	0.520	O	|	|	|	3.95
65.083	0.00	0.50	0.517	O	|	|	|	3.94
65.167	0.00	0.50	0.513	O	|	|	|	3.93
65.250	0.00	0.50	0.510	O	|	|	|	3.92
65.333	0.00	0.50	0.506	O	|	|	|	3.91
65.417	0.00	0.50	0.503	O	|	|	|	3.90
65.500	0.00	0.50	0.499	O	|	|	|	3.89
65.583	0.00	0.50	0.496	O	|	|	|	3.88
65.667	0.00	0.50	0.492	O	|	|	|	3.87
65.750	0.00	0.50	0.489	O	|	|	|	3.87
65.833	0.00	0.50	0.486	O	|	|	|	3.86
65.917	0.00	0.50	0.482	O	|	|	|	3.85
66.000	0.00	0.50	0.479	O	|	|	|	3.84
66.083	0.00	0.50	0.475	O	|	|	|	3.83
66.167	0.00	0.50	0.472	O	|	|	|	3.82
66.250	0.00	0.50	0.468	O	|	|	|	3.81
66.333	0.00	0.50	0.465	O	|	|	|	3.80
66.417	0.00	0.50	0.461	O	|	|	|	3.79
66.500	0.00	0.50	0.458	O	|	|	|	3.78
66.583	0.00	0.50	0.455	O	|	|	|	3.78
66.667	0.00	0.50	0.451	O	|	|	|	3.77
66.750	0.00	0.50	0.448	O	|	|	|	3.76
66.833	0.00	0.50	0.444	O	|	|	|	3.75
66.917	0.00	0.50	0.441	O	|	|	|	3.74
67.000	0.00	0.50	0.437	O	|	|	|	3.73
67.083	0.00	0.50	0.434	O	|	|	|	3.72
67.167	0.00	0.50	0.431	O	|	|	|	3.71
67.250	0.00	0.50	0.427	O	|	|	|	3.70
67.333	0.00	0.50	0.424	O	|	|	|	3.69
67.417	0.00	0.50	0.420	O	|	|	|	3.68
67.500	0.00	0.50	0.417	O	|	|	|	3.68
67.583	0.00	0.50	0.413	O	|	|	|	3.67
67.667	0.00	0.50	0.410	O	|	|	|	3.66
67.750	0.00	0.50	0.406	O	|	|	|	3.65
67.833	0.00	0.50	0.403	O	|	|	|	3.64
67.917	0.00	0.50	0.400	O	|	|	|	3.63
68.000	0.00	0.50	0.396	O	|	|	|	3.62
68.083	0.00	0.50	0.393	O	|	|	|	3.61
68.167	0.00	0.50	0.389	O	|	|	|	3.60
68.250	0.00	0.50	0.386	O	|	|	|	3.59
68.333	0.00	0.50	0.382	O	|	|	|	3.58
68.417	0.00	0.50	0.379	O	|	|	|	3.58
68.500	0.00	0.50	0.375	O	|	|	|	3.57
68.583	0.00	0.50	0.372	O	|	|	|	3.56
68.667	0.00	0.50	0.369	O	|	|	|	3.55
68.750	0.00	0.50	0.365	O	|	|	|	3.54
68.833	0.00	0.50	0.362	O	|	|	|	3.53
68.917	0.00	0.50	0.358	O	|	|	|	3.52
69.000	0.00	0.50	0.355	O	|	|	|	3.51
69.083	0.00	0.50	0.351	O	|	|	|	3.50
69.167	0.00	0.50	0.348	O	|	|	|	3.49
69.250	0.00	0.50	0.344	O	|	|	|	3.49
69.333	0.00	0.50	0.341	O	|	|	|	3.48

69.417	0.00	0.50	0.338	O	|	|	|	3.47
69.500	0.00	0.50	0.334	O	|	|	|	3.46
69.583	0.00	0.50	0.331	O	|	|	|	3.45
69.667	0.00	0.50	0.327	O	|	|	|	3.44
69.750	0.00	0.50	0.324	O	|	|	|	3.43
69.833	0.00	0.50	0.320	O	|	|	|	3.42
69.917	0.00	0.50	0.317	O	|	|	|	3.41
70.000	0.00	0.50	0.313	O	|	|	|	3.40
70.083	0.00	0.50	0.310	O	|	|	|	3.39
70.167	0.00	0.50	0.307	O	|	|	|	3.39
70.250	0.00	0.50	0.303	O	|	|	|	3.38
70.333	0.00	0.50	0.300	O	|	|	|	3.37
70.417	0.00	0.50	0.296	O	|	|	|	3.36
70.500	0.00	0.50	0.293	O	|	|	|	3.35
70.583	0.00	0.50	0.289	O	|	|	|	3.34
70.667	0.00	0.50	0.286	O	|	|	|	3.33
70.750	0.00	0.50	0.282	O	|	|	|	3.32
70.833	0.00	0.50	0.279	O	|	|	|	3.31
70.917	0.00	0.50	0.276	O	|	|	|	3.30
71.000	0.00	0.50	0.272	O	|	|	|	3.30
71.083	0.00	0.50	0.269	O	|	|	|	3.29
71.167	0.00	0.50	0.265	O	|	|	|	3.28
71.250	0.00	0.50	0.262	O	|	|	|	3.27
71.333	0.00	0.50	0.258	O	|	|	|	3.26
71.417	0.00	0.50	0.255	O	|	|	|	3.25
71.500	0.00	0.50	0.251	O	|	|	|	3.24
71.583	0.00	0.50	0.248	O	|	|	|	3.23
71.667	0.00	0.50	0.245	O	|	|	|	3.22
71.750	0.00	0.50	0.241	O	|	|	|	3.21
71.833	0.00	0.50	0.238	O	|	|	|	3.20
71.917	0.00	0.50	0.234	O	|	|	|	3.20
72.000	0.00	0.50	0.231	O	|	|	|	3.19
72.083	0.00	0.50	0.227	O	|	|	|	3.18
72.167	0.00	0.50	0.224	O	|	|	|	3.17
72.250	0.00	0.50	0.220	O	|	|	|	3.16
72.333	0.00	0.50	0.217	O	|	|	|	3.15
72.417	0.00	0.50	0.214	O	|	|	|	3.14
72.500	0.00	0.50	0.210	O	|	|	|	3.13
72.583	0.00	0.50	0.207	O	|	|	|	3.12
72.667	0.00	0.50	0.203	O	|	|	|	3.11
72.750	0.00	0.50	0.200	O	|	|	|	3.10
72.833	0.00	0.50	0.196	O	|	|	|	3.10
72.917	0.00	0.50	0.193	O	|	|	|	3.09
73.000	0.00	0.50	0.189	O	|	|	|	3.08
73.083	0.00	0.50	0.186	O	|	|	|	3.07
73.167	0.00	0.50	0.183	O	|	|	|	3.06
73.250	0.00	0.50	0.179	O	|	|	|	3.05
73.333	0.00	0.50	0.176	O	|	|	|	3.04
73.417	0.00	0.50	0.172	O	|	|	|	3.03
73.500	0.00	0.50	0.169	O	|	|	|	3.02
73.583	0.00	0.50	0.165	O	|	|	|	3.01
73.667	0.00	0.50	0.162	O	|	|	|	3.01
73.750	0.00	0.50	0.158	O	|	|	|	3.00
73.833	0.00	0.50	0.155	O	|	|	|	2.99
73.917	0.00	0.50	0.152	O	|	|	|	2.98
74.000	0.00	0.50	0.148	O	|	|	|	2.97
74.083	0.00	0.50	0.145	O	|	|	|	2.96
74.167	0.00	0.50	0.141	O	|	|	|	2.95
74.250	0.00	0.50	0.138	O	|	|	|	2.94
74.333	0.00	0.50	0.134	O	|	|	|	2.93
74.417	0.00	0.50	0.131	O	|	|	|	2.92
74.500	0.00	0.50	0.127	O	|	|	|	2.91
74.583	0.00	0.50	0.124	O	|	|	|	2.90

74.667	0.00	0.50	0.121	O	|	|	|	2.89
74.750	0.00	0.50	0.117	O	|	|	|	2.88
74.833	0.00	0.50	0.114	O	|	|	|	2.87
74.917	0.00	0.50	0.110	O	|	|	|	2.86
75.000	0.00	0.50	0.107	O	|	|	|	2.85
75.083	0.00	0.50	0.103	O	|	|	|	2.84
75.167	0.00	0.50	0.100	O	|	|	|	2.83
75.250	0.00	0.50	0.096	O	|	|	|	2.82
75.333	0.00	0.50	0.093	O	|	|	|	2.81
75.417	0.00	0.50	0.090	O	|	|	|	2.80
75.500	0.00	0.50	0.086	O	|	|	|	2.79
75.583	0.00	0.50	0.083	O	|	|	|	2.78
75.667	0.00	0.50	0.079	O	|	|	|	2.77
75.750	0.00	0.50	0.076	O	|	|	|	2.76
75.833	0.00	0.50	0.072	O	|	|	|	2.75
75.917	0.00	0.50	0.069	O	|	|	|	2.74
76.000	0.00	0.50	0.065	O	|	|	|	2.73
76.083	0.00	0.50	0.062	O	|	|	|	2.72
76.167	0.00	0.50	0.059	O	|	|	|	2.71
76.250	0.00	0.50	0.055	O	|	|	|	2.70
76.333	0.00	0.50	0.052	O	|	|	|	2.69
76.417	0.00	0.50	0.048	O	|	|	|	2.68
76.500	0.00	0.50	0.045	O	|	|	|	2.67
76.583	0.00	0.50	0.041	O	|	|	|	2.66
76.667	0.00	0.50	0.038	O	|	|	|	2.65
76.750	0.00	0.50	0.035	O	|	|	|	2.64
76.833	0.00	0.50	0.031	O	|	|	|	2.64
76.917	0.00	0.50	0.028	O	|	|	|	2.63
77.000	0.00	0.50	0.024	O	|	|	|	2.62
77.083	0.00	0.50	0.021	O	|	|	|	2.61
77.167	0.00	0.50	0.017	O	|	|	|	2.60
77.250	0.00	0.50	0.014	O	|	|	|	2.59
77.333	0.00	0.50	0.010	O	|	|	|	2.58
77.417	0.00	0.50	0.007	O	|	|	|	2.57
77.500	0.00	0.50	0.004	O	|	|	|	2.56
77.583	0.00	0.33	0.001	O	|	|	|	1.67
77.667	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 932
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 13.889 (CFS)
Total volume = 5.422 (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

****

DRAINAGE KEY MAPS ..... E

LEGEND

- PROPERTY BOUNDARY
- MAJOR DRAINAGE BOUNDARY
- MINOR DRAINAGE SUB-BOUNDARY
- LENGTH — FLOW PATH
- AREA-ID / ACRES — DRAINAGE AREA NUMBER AND ACREAGE
- ACRES — SUBAREA DRAINAGE ACREAGE
- ELEV. / INV. EL / Q_{100}= (No.) — HYDROLOGY NODE AND ELEVATION
- A / D — HYDRAULIC SOIL GROUP BOUNDARY AND CLASSIFCATION

6.47

L=992'

1976.0 EG (100)

1672.0 EG (101)

L=1527'

AREA-XA
104.71

1922.0 EG (300)

1.98

L=714'

1557.0 EG (301)

1880.0 EG (200)

AREA-XC
40.56

38.58

L=2475'

L=5722'

3.80

L=802'

1580.0 EG (201)

98.24

AREA-XB
19.51

L=1716'

15.71

1502.5 EG (302)
Q_{100}=83.0 CFS
T_c=15.19 MIN.

1502.7 EG (102)
Q_{100}=182.5 CFS
T_c=21.16 MIN.

1503.2 EG (202)
Q_{100}=44.9 CFS
T_c=13.35 MIN.

ROCKLAND

ROCKLAND

CELESTE ROAD

OLD WARREN ROAD

MEYERS ROAD

SCALE: 1"=100'
0 100 200 300

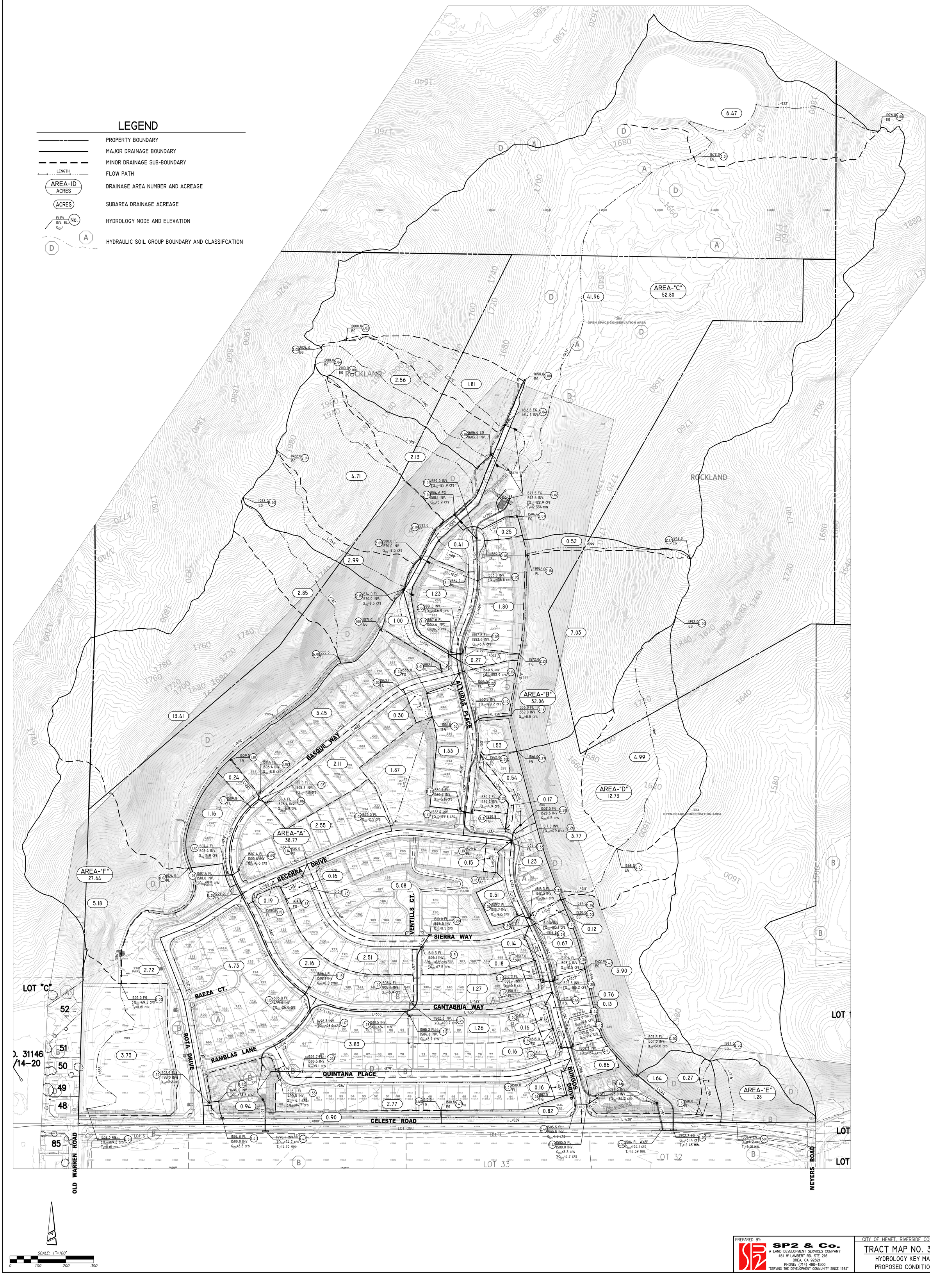
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"SERVING THE DEVELOPMENT COMMUNITY SINCE 1985"

CITY OF HEMET, RIVERSIDE COUNTY
TRACT MAP NO. 31513
RATIONAL METHOD KEY MAP
EXISTING CONDITION

Plotted: Jul 21, 2025 - 12:21am By: AlexanderJaramillo DWG: \\sp2-hsb2\SP2-Data\SP2 Active\2022\J00322 Hemet, Tres Cerritos TI-31513 - Horton\Entitlement Engineering\Stormwater\Preliminary Drainage\Calcs\TI 31513-RMKM Present.dwg

LEGEND

- PROPERTY BOUNDARY
- MAJOR DRAINAGE BOUNDARY
- MINOR DRAINAGE SUB-BOUNDARY
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CITY OF HEMET, RIVERSIDE COUNTY

TRACT MAP NO. 31513

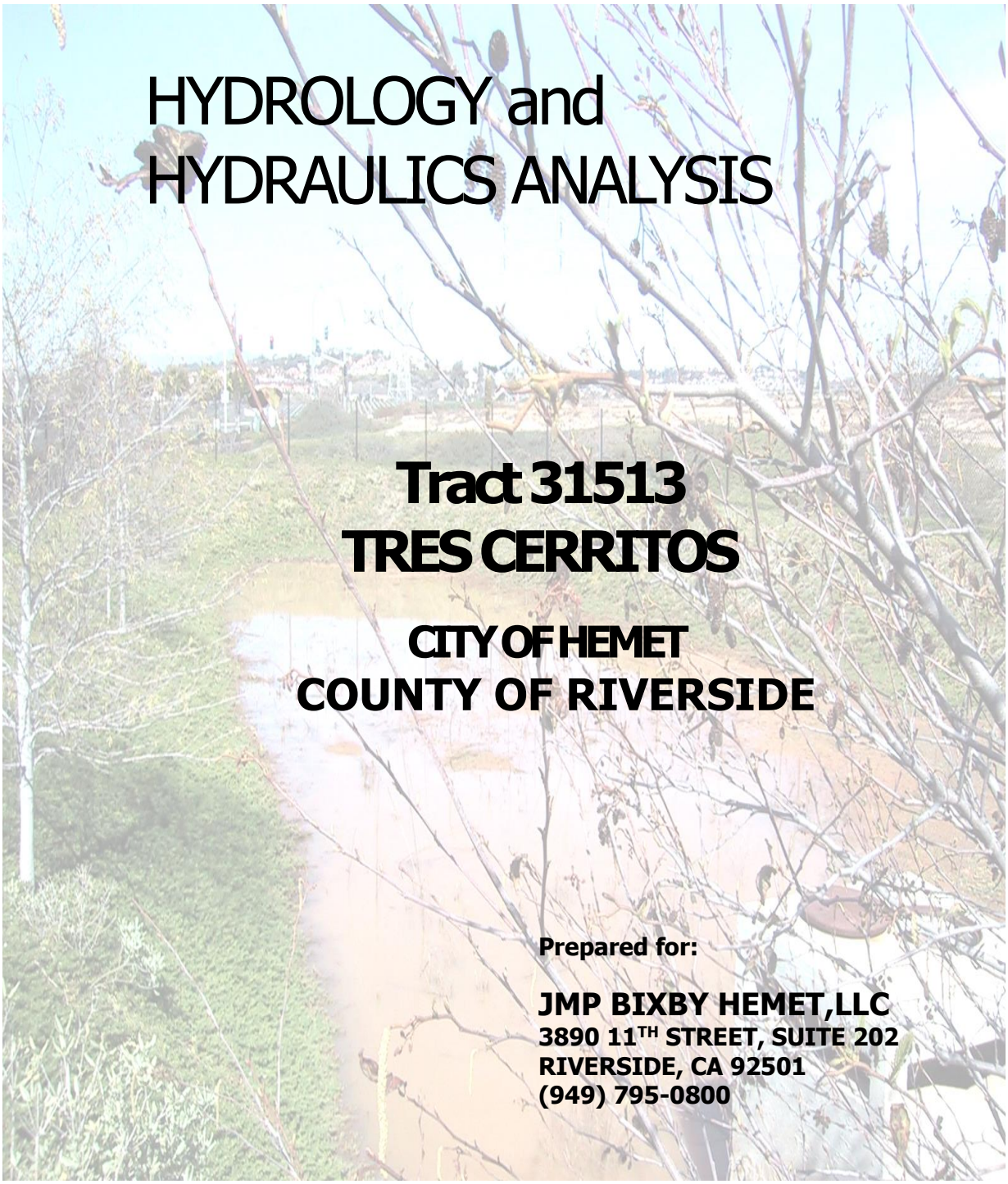
HYDROLOGY KEY MAP
PROPOSED CONDITION

DWG: \\sp2-nas2\SP2Data\SP2 Active\2023\08022 Hemet, Tres Cerritos 7\31513 - Horton\Entitlement Engineering\Stormwater\Preliminary Drainage\Calcs\7\ 31513-2MKM Proposed.dwg
By: AlexandeJaramillo
Plotted: Jul 21, 2025 - 10:38am

EXCERPTS

HYDROLOGY AND HYDRAULICS ANALYSIS FOR TRACT 31513 TRES CERRITOS PREPARED BY MAYERS & ASSOCIATES, DATED 10/08/21 (FOR REFERENCE PURPOSES ONLY) ...EXCERPT A

MAYERS & ASSOCIATES
Civil Engineering, Inc.
PLANNING • ENGINEERING • SURVEYING



HYDROLOGY and HYDRAULICS ANALYSIS

Tract 31513
TRES CERRITOS

CITY OF HEMET
COUNTY OF RIVERSIDE

Prepared for:

JMP BIXBY HEMET,LLC
3890 11TH STREET, SUITE 202
RIVERSIDE, CA 92501
(949) 795-0800

HYDROLOGY & HYDRAULICS ANALYSIS

FOR

TRACT 31513

CITY OF HEMET



PREPARED UNDER THE SUPERVISION OF:

10/8/21

Date:

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I INTRODUCTION

A. Purpose

The purpose of this report is to provide a hydrology analysis for Tract 31513 in the Tres Cerritos area of the City of Hemet. This study will calculate the 10-year and 100-year storm discharges to support the processing of the Rough Grading Plan for the development site.

B. Methodology

The methodology used to determine the peak discharges is based upon the criteria contained in the Riverside County Flood Control & Water Conservation District Hydrology Manual. The hydrologic soil types were determined from the Hydrologic Classification of Soils map contained in the Riverside County Hydrology Manual.

The following work plan and analyses were undertaken in the preparation of this drainage study.

All available information and improvement plans were collected.

A field review of the project site was performed.

The drainage areas within and tributary to the project site were defined.

A hydrologic computer model was prepared based on the proposed drainage patterns.

The results of the study and the calculations for the hydrological analysis are presented in this report.

II. STUDY AREA

A. Description

Tentative Tract 31513 is a 121.3-acre site located north of Celeste Road between Old Warren Road and Myers Street.

The proposed development of the 121.3-acre site will include construction of 177 single-family dwelling units, 1 detention basin, two water quality basins, and appropriate infrastructure.

B. Existing Condition

The site is currently in a natural condition. Topographically, the northern portion of the site is comprised of steep granitic hillsides that surround the central portion of the site. The central portion of the site gently slopes southerly to Celeste Road. The top of the drainage area is above the EMWD water tank site. Site topographic relief is on the order of 260 feet. The lowest elevation of approximately 1500 feet above mean sea level (msl) is located along the border of the site. The highest elevation of approximately 1,960 feet msl is located outside the project boundary in the north.

The storm runoff flows through the upper portion of the site in a well defined natural channel. This channel becomes undefined approximately 1500 feet south of the northern property boundary. At this point the flow begins to sheet flow across the lower portion of the site. The storm runoff leaves the site by sheet flow across Rose Road. There are no existing drainage facilities located in the vicinity of the project site.

III. HYDROLOGIC ANALYSIS

A. General

The hydrologic studies prepared in this report utilized the rational method in accordance with the Riverside County Flood Control & Water Conservation District Hydrology Manual.

Hydrology calculations for the 10-year and 100-year frequency storms were prepared using the “Rational Method Hydrology Computer Program Package” by CivilDesign Corporation Software based on the hydrology manual criterion.

The rational method computes the peak runoff as a function of area, rainfall intensity, and a coefficient of runoff. The basic formula in the rational method is as follows:

$$Q = CIA$$

Where:

Q = Peak runoff in cubic feet per second (cfs)
C = Coefficient of runoff
I = Average rainfall in inches per hour corresponding to the time of concentration
A = Drainage area in acres

This formula computes the peak flow rate at all points of concentration. The hydrology analysis is provided in this report.

Land use in the study area is a significant factor in the development of the hydrology study in that the coefficient of runoff used in the rational method are partially dependent upon the type of surface development proposed within the drainage area. The land use used in this study is based upon the development proposed for Tentative Tract 31513.

The major factor affecting infiltration is the nature of the soil. Hydrologic soil types within the study area were determined from the Hydrologic Classification of Soils map contained in the RCFC&WCD Hydrology Manual. The soil classification is based on the Soil Conservation Service criteria as follows: The rational method calculations are contained in Section V.

Soil Group A Low runoff potential, consisting mainly of deep, well-defined sands or gravel.

Soil Group B Soils having moderate infiltration rates, consisting of moderately well drained sandy-loam soils with fine to moderate coarse textures.

Soil Group C Soils having slow infiltration rates, consisting of silty-loam soils with moderate fine textures.

Soil Group D High runoff potential with slow infiltration rates, consisting mainly of clay soils with a permanent high water table or shallow soils over impervious material.

Rainfall intensity is expressed in inches of rainfall per hour and is developed by statistical methods from historical rainfall records. The rainfall intensity data used in this study was obtained from the curves for mean precipitation intensities included in the RCFC&WCD Hydrology Manual.

B. Rational Method Hydrology Analysis

1. Existing Condition

The runoff in the existing condition ultimately sheet flows to Rose Road at the southern boundary of the project site. The total tributary drainage area to Rose Road is 164.8 acres. The entire area is in a natural condition and produces a 100-year storm discharge of 347.9 cfs.

2. Developed Condition

Upon development of the project site, the site will consist of three drainage areas. Refer to the Hydrology Map in Section VIII for developed condition.

Drainage Area “A” consists of the upper hillside area and the eastern portion of the site. The upper portion of the area is tributary to a detention basin located at the terminus of Street “I”. The area tributary to the detention basin is 52.9 acres and produces an inflow runoff of 122.8 cfs. A hydrograph for this area was prepared and routed through the basin. The 100-year discharge from the basin is 106.8 cfs. The hydrograph analysis is contained in Section V, E, basin routing in Section V, F, storage calculations in Section V, G, and the basin outlet calculations are contained in Section V, H.

The entire area is tributary to the water quality basin located at the southeast portion of the site. The total tributary area to this basin is 98.9 acres which produces a 100-year storm discharge of 202.5 cfs.

Drainage Area “B” contains the majority of the development. This area is tributary to the water quality basin located in the southwest portion of the site. This area contains approximately 42.2 acres and produces a 100-year storm discharge of 86.8 cfs.

Drainage Area “C” in the developed condition will remain in a natural condition and storm flows will be conveyed through the proposed V-ditch adjacent to the west site of the project and then discharged directly to the natural area in the southwest corner of the site. This area contains approximately 24.8 acres and produces a 100-year storm discharge of 58.0 cfs.

The hydrology map for the developed condition analysis contains all pertinent information and is presented in Section VIII of this report.

3. Hydrology Comparison

The total 100-year storm discharge in the developed condition is equal to the sum of the three drainage areas. This sum is 347.3 cfs. This 100-year discharge is less than the existing condition 100-year storm discharge of 347.9 cfs.

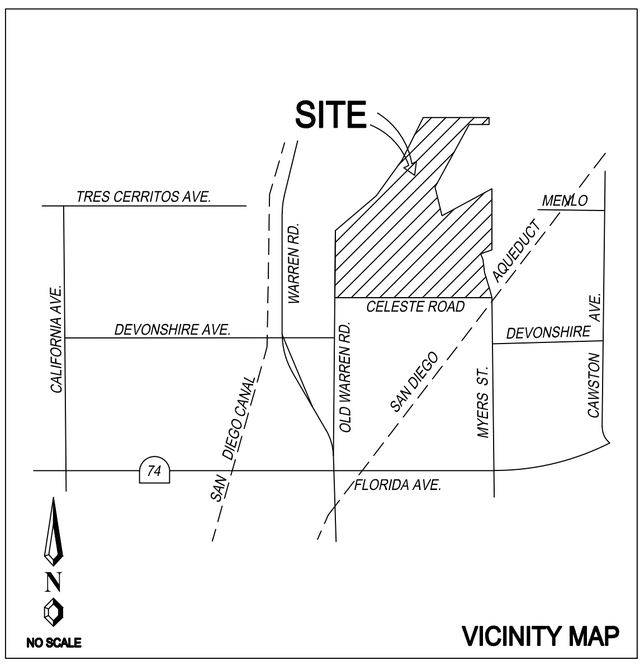
IV. PROPOSED DRAINAGE FACILITIES

In conjunction with the development of the site, a proposed detention basin will be constructed at the terminus of Street “I. This basin will collect runoff from the northern portion of the drainage area.

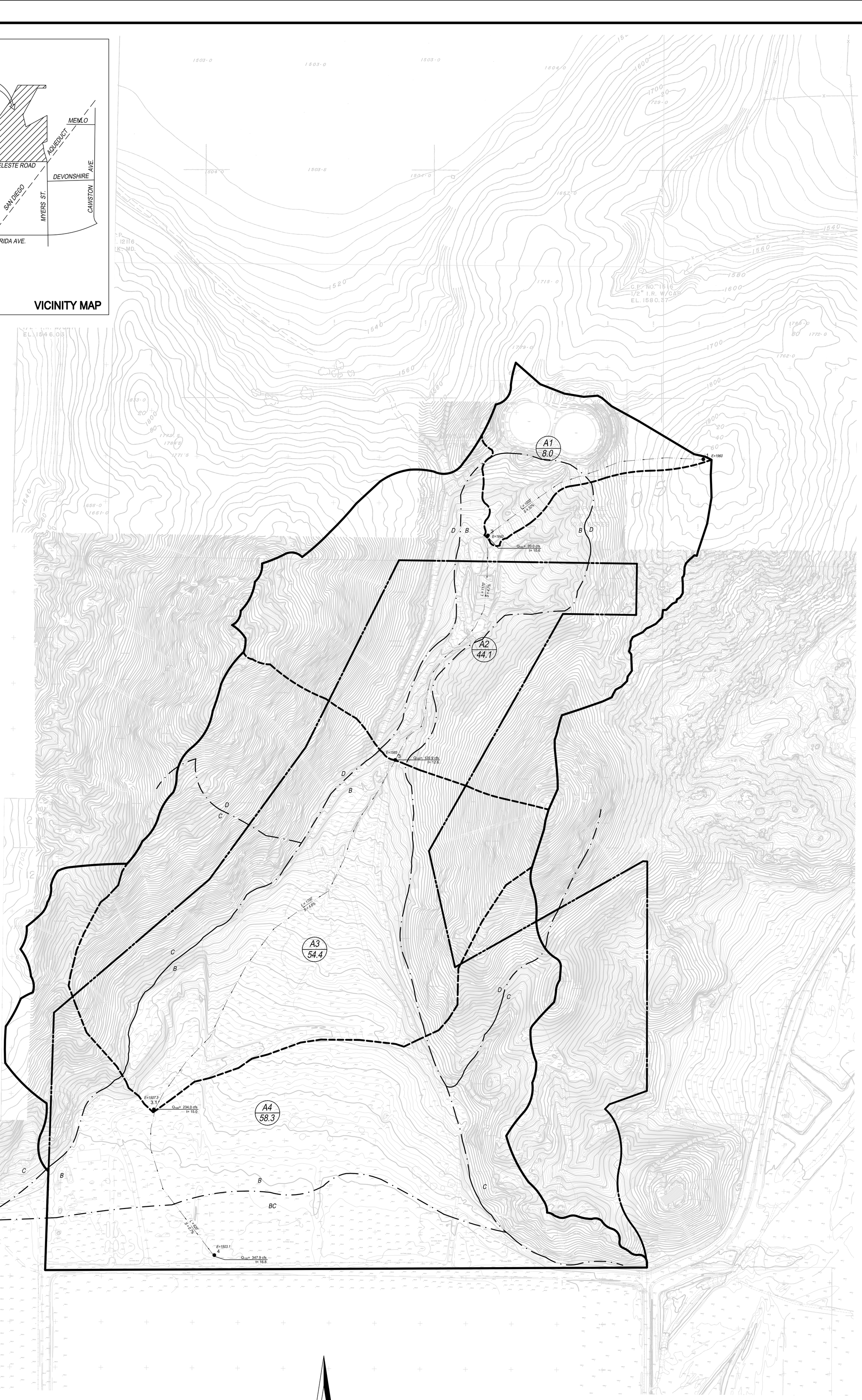
A storm drain will convey storm flows from the detention basin southerly within Street “I” to Street “A”. The storm drain will continue in Street “A” southerly to a discharge point in the water quality basin located at the intersection of Street “A” and Celeste Road. At this point the water will be conveyed across Celeste Road in a pipe. The flows will fill this pipe and rise to the surface of the adjacent property and sheet flow will be promoted by a long weir structure. After the storms a small pump will be utilized to drain the pipe and basin.

The 100-year storm flows from Drainage Area “B” will be conveyed within the streets until the intersection of Street “A” and Street “H”. At this point a storm drain will collect the runoff and convey the flows within Street “A” southerly to the water quality basin located at the intersection of Street “A” and Celeste Road in the southwest portion of the site. Another storm drain will collect flows from Street “B” and Street “C” and convey these flows through paseos to the water quality basin. At this point the water will be conveyed across Celeste Road in a pipe. The flows will fill this pipe and rise to the surface of the adjacent property and sheet flow will be promoted by a long weir structure. After the storms a small pump will be utilized to drain the pipe and basin.

The 100-year runoff from Drainage Area “C” will be conveyed around the west side of the development in a v-ditch. These flows will be discharged into Lot “F” and be allowed to sheet flow through this open space to a storm drain that will convey this runoff across Rose Road.



VICINITY MAP



LEGEND

- MAJOR DRAINAGE BOUNDARY
- MINOR DRAINAGE BOUNDARY
- 100 — NODE NUMBER
- A / 1.0 — AREA DESIGNATION / AREA ACREAGE (IN ACRES)
- SOIL BOUNDARY
- ΣQ_{100}= 10.0cfs / t= — PEAK CONFLUENCE FLOW RATE / TIME OF CONCENTRATION
- PROPOSED STORM DRAIN

N

SCALE: 1" = 200'

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
SCALE: 1" = 200'

EXISTING HYDROLOGY MAP
TRACT 31513
IN THE CITY OF HEMET, CALIFORNIA

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MAYERS & ASSOCIATES
Civil Engineering, Inc.
PLANNING • ENGINEERING • SURVEYING

SCALE: 1" = 200'

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
SCALE: 1" = 200'


E.M.W.D. TANK SITE
N.A.P.
PROP. WATERLINE
EXIST. E.M.W.D. WATERLINE
LEA PARCEL
457,776 SF
10.49 ACRES
C.P. NO. 1516
1/2" I.R. W/CAP
EL. 1580.37
A1 8.0
A2 44.9
A3 1.7
A4 9.0
A5 4.7
A6 2.7
A7 2.1
A8 2.4
A9 1.0
A10 1.0
A11 0.1
A12 0.7
A13 1.9
A14 0.2
A15 1.5
A16 0.1
A17 0.3
A18 0.72
A19 0.6
A20 3.6
A22 6.1
B1 2.4
B2 2.8
B3 1.7
B4 2.0
B5 3.4
B5.1 0.7
B6 0.4
B6.1 0.3
B7 0.8
B8 2.7
B9 0.3
B10 5.3
B11 3.3
B11.1 1.4
B12 1.3
B12.1 2.4
B13 1.9
B13.1 1.7
B14 2.6
B14.1 3.1
B15 0.8
B17 0.9
C1 3.5
C2 10.8
C3 6.7
C4 3.8
21 5.2
Q_{100}= 20.0 cfs t= 10.6
Q_{100}= 90.0 cfs t= 12.6 C.B. # 24
Q_{100}= 16.8 cfs OUT t= 12.6
Q_{100}= 122.8 cfs IN t= 12.6
Q_{100}= 90.0 cfs OUT t= 12.6
ΣQ_{100}= 106.8 cfs t=12.8
Q_{100}= 4.8 cfs t= 7.9 C.B. # 1
Q_{100}= 23.5 cfs t= 9.9
ΣQ_{100}=110.5 cfs t=13.0
Q_{100}= 12.4 cfs t= 9.7
ΣQ_{100} = 130.4 cfs t=14.0
Q_{100}= 5.4 cfs t= 9.3
Q_{100}= 9.0 cfs t= 10.1
Q_{100}= 5.8 cfs t= 10.3 C.B. #26
Q_{100}= 10.0 cfs t= 10.3
Q_{100}= 4.3 cfs t= 9.7 C.B. #27
Q_{100}= 35.4 cfs t= 11.1
Q_{100}= 12.6 cfs t= 9.4 C.B. #3
Q_{100}= 0.4 cfs t= 5.0 C.B. #4
Q_{100}= 1.5 cfs t= 21.9
Q_{100}= 11.0 cfs t= 11.1 C.B.#2
ΣQ_{100} = 158.5 cfs t=13.5
Q_{100}= 7.7 cfs t= 11.7 C.B # 14
Q_{100}= 1.0 cfs t= 9.1 C.B # 25
Q_{100}= 8.7 cfs t= 11.8
ΣQ_{100}= 10.9 cfs t=12.5
Q_{100}= 0.7 cfs t=12.5 C.B # 13
ΣQ_{100} = 30.8 cfs t=11.7
Q_{100}= 6.4 cfs t= 11.5 C.B. # 10
ΣQ_{100}= 20.9 cfs t= 11.7
ΣQ_{100} = 159.8 cfs t=13.5
Q_{100}= 11.0 cfs t= 14.0 C.B # 17
Q_{100}= 3.4 cfs t= 9.7 C.B. # 31
Q_{100}= 7.7 cfs t=11.2 C.B. # 30
Q_{100}= 1.5 cfs t= 13.6 C.B. # 5
ΣQ_{100} = 164.9 cfs t=15.3
Q_{100}= 4.0 cfs t= 13.4 C.B # 6
Q_{100}= 22.6 cfs t= 10.7
Q_{100}= 51.2 cfs t= 11.9
ΣQ_{100}= 28.7 cfs t=12.3
Q_{100}= 5.5 cfs t= 11.4 C.B. # 18
Q_{100}= 1.8 cfs t= 12.4 C.B # 33
Q_{100}= 5.6 cfs t= 13.2 C.B # 20
Q_{100}= 9.7 cfs t=12.2 C.B # 19
Q_{100}= 13.7 cfs t= 11.2
Q_{100}= 3.2 cfs t= 11.8 C.B # 32
Q_{100}= 0.7 cfs t= 5.9 C.B. # 7
ΣQ_{100} = 165.3 cfs t=15.6
Q_{100}= 4.0 cfs t= 10.7 C.B #8
ΣQ_{100}= 32.5 cfs t = 12.8
Q_{100}= 0.9 cfs t= 7.8 C.B. #16
Q_{100}= 5.40 cfs t= 14.9 C.B. # 15
ΣQ_{100}= 38.0 cfs t = 13.2
ΣQ_{100}= 38.0 cfs t = 13.3
Q_{100}= 3.8 cfs t= 15.3 C.B. # 29
Q_{100}= 0.4 cfs t= 5.0 C.B. # 9
ΣQ_{100} = 170.3 cfs t=15.9
Q_{100}= 58.0 cfs t= 16.3
ΣQ_{100} = 86.6 cfs t=13.6
Q_{100}= 1.6 cfs t= 10.2 C.B. # 21
ΣQ_{100}= 168.8 cfs t = 14.8
Q_{100}= 15.8 cfs t= 11.7 C.B #22
ΣQ_{100} = 204.6 cfs t= 15.9
ΣQ_{100}= 39.1 cfs t = 13.3
Q_{100}= 1.6 cfs t= 18.7 C.B # 24
L= 1000' S= 39.1%
L= 740' S= 5.4%
L= 700' S= 2.3%
L= 910' S= 40.4%
L= 660' S= 5.0%
L= 740' S= 0.6%
L= 1060' S= 5.0%
L= 1080' S= 5.0%
L= 1040' S= 5.0%
L= 1020' S= 5.0%
L= 1000' S= 5.0%
L= 980' S= 5.0%
L= 960' S= 5.0%
L= 940' S= 5.0%
L= 920' S= 5.0%
L= 900' S= 5.0%
L= 880' S= 5.0%
L= 860' S= 5.0%
L= 840' S= 5.0%
L= 820' S= 5.0%
L= 800' S= 5.0%
L= 780' S= 5.0%
L= 760' S= 5.0%
L= 740' S= 5.0%
L= 720' S= 5.0%
L= 700' S= 5.0%
L= 680' S= 5.0%
L= 660' S= 5.0%
L= 640' S= 5.0%
L= 620' S= 5.0%
L= 600' S= 5.0%
L= 580' S= 5.0%
L= 560' S= 5.0%
L= 540' S= 5.0%
L= 520' S= 5.0%
L= 500' S= 5.0%
L= 480' S= 5.0%
L= 460' S= 5.0%
L= 440' S= 5.0%
L= 420' S= 5.0%
L= 400' S= 5.0%
L= 380' S= 5.0%
L= 360' S= 5.0%
L= 340' S= 5.0%
L= 320' S= 5.0%
L= 300' S= 5.0%
L= 280' S= 5.0%
L= 260' S= 5.0%
L= 240' S= 5.0%
L= 220' S= 5.0%
L= 200' S= 5.0%
L= 180' S= 5.0%
L= 160' S= 5.0%
L= 140' S= 5.0%
L= 120' S= 5.0%
L= 100' S= 5.0%
L= 80' S= 5.0%
L= 60' S= 5.0%
L= 40' S= 5.0%
L= 20' S= 5.0%
L= 500' S= 66.6%
PIPE LENGTH = 400
PIPE LENGTH = 175
PIPE LENGTH = 180
PIPE LENGTH = 140
PIPE LENGTH = 160
PIPE LENGTH = 120
PIPE LENGTH = 100
PIPE LENGTH = 80
PIPE LENGTH = 60
PIPE LENGTH = 40
PIPE LENGTH = 20
28'
20'
N 89°13'13" W 1635'
N89°53'40"W 274.98'
N89°53'40"W 160.00'
N00°06'20"E 527.20'
N00°06'20"E 384.00'
E=1948
E=2013
E=1955
E=1564
E=1527
E=1504
E=1511
E=1533
E=1580
E=1639
E=1585
E=1554
E=1553.5
E=1563.4
E=1565
E=1542.6
E=1541.2
E=1525.3
E=1525.7
E=1523.8
E=1527.5
E=1511.9
E=1509.6
E=1509.0
E=1510.2
E=1518.2
E=1518.8
E=1516.5
E=1516.6
E=1506.7
E=1509
E=1505.7
E=1504.7
E=1503.4
E=1508.5
E=1506.4
E=1506
E=1512.5
E=1513.3
E=1515.3
E=1518.1
E=1495
E=1494.5
E=1503
E=1503.2
E=1504.7
E=1519.6
E=1519.8
E=1516.5
E=1509.6
E=1509.0
E=1510.2
E=1518.2
E=1518.8
E=1516.5
E=1516.6
E=1506.7
E=1509
E=1505.7
E=1504.7
E=1503.4
E=1508.5
E=1506.4
E=1506
E=1512.5
E=1513.3
E=1515.3
E=1518.1
E=1495
E=1494.5
E=1503
E=1503.2
E=1504.7
E=1519.6
E=1519